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TEST REPORT

Report Number: 23051041HKG-001

Embodied, Inc.

Application for Original Grant of 47 CFR Part 15 Certification

Transceiver

FCC ID: 2AV9NEMBMOXIEVTWO

This report contains the data of 2.4GHz WLAN (Wi-Fi) portion only

Prepared and Checked by:	**Approved by:**
Signed On File Leung Chun Ning, Peter Assistant Engineer	Digitally signed by Herbert Wong Location: Intertek Testing Services Hong Kong Limited Wong Cheuk Ho, Herbert Assistant Supervisor Date: November 08, 2023

TEST REPORT

GENERAL INFORMATION

Applicant Name:	Embodied, Inc.
Applicant Address:	385 E Colorado Blvd Ste 110, Pasadena California 91101, United States.
FCC Specification Standard:	FCC Part 15, October 1, 2021 Edition
Brand Name:	Embodied Moxie V2
FCC ID:	2AV9NEMBMOXIEVTWO
FCC Model(s):	101600
Type of EUT:	Spread Spectrum Transmitter
Description of EUT:	Embodied Moxie V2
Sample Receipt Date:	November 25, 2022
Date of Test:	May 10, 2023 to November 08, 2023
Report Date:	November 08, 2023
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%
Conclusion:	Test was conducted by client submitted sample. The submitted sample after modification complied with the 47 CFR Part 15 Certification.
Remark:	This report contains the data of 2.4GHz Wi-Fi portion only.

TEST REPORT

TABLE OF CONTENTS

1.0 TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

1.1 Summary of Test Results

Test Items	FCC Part 15 Section	Results	Details See Section
Antenna Requirement	15.203	Pass	2.1
Max. Conducted Output Power (Peak)	15.247(b)(3)&(4)	Pass	4.1
Min. 6dB RF Bandwidth	15.247(a)(2)	Pass	4.2
Max. Power Density (average)	15.247(e)	Pass	4.3
Out of Band Antenna Conducted Emission	15.247(d)	Pass	4.4
Radiated Emission in Restricted Bands and Spurious Emissions	15.247(d), 15.209 & 15.109	Pass	4.6
AC Power Line Conducted Emission	15.207 & 15.107	Pass	4.7

Note: Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

1.2 Statement of Compliance

The equipment under test is found to be complying with the following standard:

FCC Part 15, October 1, 2021 Edition

2.0 GENERAL DESCRIPTION

2.1 Product Description

This device is a robot with Wi-Fi function. The Bluetooth function of this device had been disabled.

The tested model is 101600.

For IEEE 802.11b mode, it operates at frequency range of 2412.000MHz to 2462.000MHz with 11 channels. It transmits via Direct-sequence spread spectrum (DSSS) modulation. Maximum bit rate can be up to 11Mbps.

For IEEE 802.11g mode, it operates at frequency range of 2412.000MHz to 2462.000MHz with 11 channels. It transmits via Orthogonal Frequency Division Multiplexing (OFDM) modulation. Maximum bit rate can be up to 54Mbps.

For IEEE 802.11n (with 20MHz bandwidth) mode, it operates at frequency range of 2412.000MHz to 2462.000MHz with 11 channels. It transmits via Orthogonal Frequency Division Multiplexing (OFDM) modulation. Maximum bit rate can support up to 65Mbps.

For IEEE 802.11n (with 40MHz bandwidth) mode, it operates at frequency range of 2422.000MHz to 2452.000MHz with 9 channels. It transmits via Orthogonal Frequency Division Multiplexing (OFDM) modulation. Maximum bit rate can support up to 150Mbps.

The antenna(s) used in the EUT is integral, internal.

The circuit description is saved with filename: descri.pdf.

2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Preliminary radiated scans and all radiated measurements were performed in radiated emission test sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. Antenna port conducted measurements were performed according to ANSI C63.10 (2013) and KDB Publication No.558074 D01 v05r02 (04-February-2019). All other measurements were made in accordance with the procedures in 47 CFR Part 2.

2.3 Test Facility

The radiated emission test site and antenna port conducted measurement facility used to collect the radiated data and conductive data are at Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong SAR, China. This test facility and site measurement data have been fully placed on file with the FCC.

2.4 Related Submittal(s) Grants

This is a single application for certification of a transceiver (2.4GHz Wi-Fi portion).

3.0 SYSTEM TEST CONFIGURATION

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit / receive continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The EUT is power by a 10.8VDC Li-PO battery / 120VAC (Adaptor model: AD0651-1404000D).

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attached to peripherals, they were connected and operational (as typical as possible).

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For any intentional radiator powered by AC power line, measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

Radiated emission measurement for transmitter were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Emission that are directly caused by digital circuits in the transmit path and transmitter portion were measured, and the limit are according to FCC Part 15 Section 15.209. Digital circuitries used to control additional functions other than the operation of the transmitter are subject to FCC Part 15 Section 15.109 Limits.

3.1 Justification – Cont'd

Detector function for radiated emissions was in peak mode. Average readings, when required, were taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in section 4.8.3.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF.* The effective period (Teff) was referred to Exhibit 4.8.3. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3dB, the pulse desensitization factor was 0dB.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission.

All setting of data rate for 802.11b/g/n(HT20)/n(HT40) of Wi-Fi mode had been considered, and worst-case test data are shown on this test report.

There are 2 different versions for this EUT, the Richtek Camera Module version and the Sincere Camera Module version. These 2 versions are different in camera module only as declared by client. Both versions are tested and only the worst-case data is shown in this report.

3.2 EUT Exercising Software

The EUT exercise program (Ampak RFTestTool) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Details of EUT and Description of Accessories

Details of EUT:

(1) The EUT is powered by 10.8VDC and / or 120VAC

Description of Accessories:

An AC adaptor (provided with the unit) was used to power the device. Its description is listed below.

(1) An AC adaptor
(AC Input: 100-240V 50/60Hz 1.5A Max / Output: 14.0VDC 4.0A, Model: AD0651-1404000D)
(Provided by Client)

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test at a level of confidence of 95% has been considered. The values of the Measurement uncertainty for radiated emission test and RF conducted measurement test are ± 5.3dB and ±0.99dB respectively. The value of the Measurement uncertainty for conducted emission test is ±4.2dB.

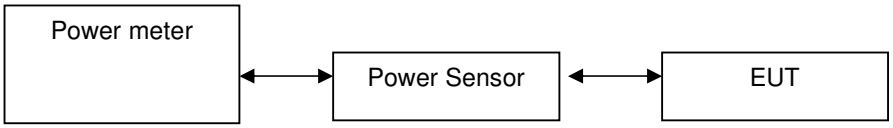
Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

4.0 TEST RESULTS

4.1 Maximum Conducted (peak) Output Power at Antenna Terminals

RF Conduct Measurement Test Setup

The figure below shows the test setup, which is utilized to make these measurements.



The antenna port of the EUT was connected to the input of a spectrum analyzer.

☒ The antenna power of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to the obtain power at the EUT antenna terminals. The measurement procedure 11.9.1.3 ANSI63.10 was used.

☐ The EUT should be configured to transmit continuously (at a minimum duty cycle of 98%) at full power over the measurement duration. The measurement procedure AVG1 was used.

IEEE 802.11b (DSSS, 1 Mbps) Antenna Gain = 2.55 dBi (max)

Frequency (MHz)		Output in dBm	Output in mWatt
Low Channel:	2412	14.883	30.8
Middle Channel:	2437	13.607	22.9
High Channel:	2462	14.087	25.6

IEEE 802.11g (OFDM, 6 Mbps) Antenna Gain = 2.55 dBi (max)

Frequency (MHz)		Output in dBm	Output in mWatt
Low Channel:	2412	10.105	10.2
Middle Channel:	2437	12.102	16.2
High Channel:	2462	10.513	11.3

IEEE 802.11n (20MHz) (OFDM, MCS0) Antenna Gain = 2.55 dBi (max)

Frequency (MHz)		Output in dBm	Output in mWatt
Low Channel:	2412	9.988	10.0
Middle Channel:	2437	11.285	13.4
High Channel:	2462	10.863	12.2

IEEE 802.11n (40MHz) (OFDM, MCS0) Antenna Gain = 2.55 dBi (max)

Frequency (MHz)		Output in dBm	Output in mWatt
Low Channel:	2422	8.220	6.6
Middle Channel:	2437	7.685	5.9
High Channel:	2452	8.300	6.8

Test Date: November 07, 2023

4.1 Maximum Conducted Output Power at Antenna Terminals – Cont'd

Cable loss: 1.02 dB External Attenuation: 2 dB

Cable loss, external attenuation: ☒ included in OFFSET function
☐ added to SA raw reading

IEEE 802.11b (DSSS, 1 Mbps)
max. conducted (peak) output level = 14.883 dBm

IEEE 802.11g (OFDM, 9 Mbps)
max. conducted (peak) output level = 12.102 dBm

IEEE 802.11n (20MHz) (OFDM, MCS0)
max. conducted (peak) output level = 11.285 dBm

IEEE 802.11n (40MHz) (OFDM, MCS0)
max. conducted (peak) output level = 8.300 dBm

Limits:
☒ 1W (30dBm) for antennas with gains of 6dBi or less

☐ ___W (___dBm) for antennas with gains more than 6dBi

4.2 Minimum 6dB RF Bandwidth

The antenna port of the EUT was connected to the input of a spectrum analyzer. The EBW measurement procedure was used. A PEAK output reading was taken, a DISPLAY line was drawn 6dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

IEEE 802.11b (DSSS, 1 Mbps)

	Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel:	2412	9.15
Middle Channel:	2437	8.20
High Channel:	2462	9.20

IEEE 802.11g (OFDM, 6 Mbps)

	Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel:	2412	16.40
Middle Channel:	2437	16.40
High Channel:	2462	15.75

IEEE 802.11n (20MHz) (OFDM, MCS0)

	Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel:	2412	17.65
Middle Channel:	2437	17.65
High Channel:	2462	16.40

IEEE 802.11n (40MHz) (OFDM, MCS0)

	Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel:	2422	35.80
Middle Channel:	2437	36.00
High Channel:	2452	35.65

Test Date: November 07, 2023

Limits
6 dB bandwidth shall be at least 500kHz

4.3 Maximum Power Spectral Density

Antenna output of the EUT was coupled directly to spectrum analyzer. The measurement procedure 11.10 of ANSI 63.10 PKPSD was used. If an external attenuator and/or cable was used, these losses are compensated for using the OFFSET function of the analyser.

IEEE 802.11b (DSSS, 1 Mbps)

Frequency (MHz)		PSD in 100kHz (dBm)
Low Channel:	2412	5.735
Middle Channel:	2437	4.088
High Channel:	2462	5.053

IEEE 802.11g (OFDM, 6 Mbps)

Frequency (MHz)		PSD in 100kHz (dBm)
Low Channel:	2412	-2.209
Middle Channel:	2437	-0.068
High Channel:	2462	-1.418

IEEE 802.11n (20MHz) (OFDM, MCS0)

Frequency (MHz)		PSD in 100kHz (dBm)
Low Channel:	2412	-1.856
Middle Channel:	2437	-0.634
High Channel:	2462	-0.853

IEEE 802.11n (40MHz) (OFDM, MCS0)

Frequency (MHz)		PSD in 100kHz (dBm)
Low Channel:	2422	-5.791
Middle Channel:	2437	-6.582
High Channel:	2452	-6.619

Cable Loss: 1.02 dB

Test Date: November 07, 2023

Limit:
8dBm

4.4 Out of Band Conducted Emissions

For 802.11b/g/n20/n40, the maximum conducted (peak) output power was used to demonstrate compliance as described in 9.1. Then the display line (in red) shown in the following plots denotes the limit at 20dB below maximum measured in-band peak PSD level in 100 KHz bandwidth for 802.11b/g/n20/n40.

The measurement procedures under sections 11 of KDB Publication No.558074 D01 v05r02 (02-April-2019) were used.

Furthermore, delta measurement technique for measuring bandedge emissions was incorporated in the test of the edge at 2483.5MHz.

Limits:
All spurious emission and up to the tenth harmonic were measured and they were found to be at least 20dB (for 802.11b/g/n20/n40) below the maximum measured in-band peak PSD level.

The plots of Out of Band Conducted Emissions are saved with filename: Testdata.pdf

4.5 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

Where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

Example
Assume a receiver reading of 62.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29.0 dB is subtracted. The pulse desensitization factor of the spectrum analyzer is 0.0 dB, and the resultant average factor is -10.0 dB. The net field strength for comparison to the appropriate emission limit is 32.0 dBµV/m. This value in dBµV/m is converted to its corresponding level in µV/m.

RA = 62.0 dBµV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0.0 dB
AV = -10 dB

FS = 62.0 + 7.4 + 1.6 – 29.0 + 0.0 + (-10.0) = 32.0 dBµV/m

Level in µV/m = Common Antilogarithm [(32.0 dBµV/m)/20] = 39.8 µV/m

4.6 Transmitter Radiated Emissions in Restricted Bands and Spurious Emissions

Data is included of the worst-case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

4.6.1 Radiated Emission Configuration Photograph

Worst Case Restricted Band Radiated Emission
at

1593.000 MHz

The worst-case radiated emission configuration photographs are saved with filename: setup photos.pdf

4.6.2 Radiated Emission Data

The data in tables 1-13 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 0.2 dB margin

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 01
Test Date: June 10, 2023

Table 1
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	38.2	33	27.2	32.4	54.0	-21.6
H	2390.000	56.8	33	29.4	53.2	54.0	-0.8
H	4824.000	44.3	33	34.9	46.2	54.0	-7.8
V	7236.000	29.3	33	37.9	34.2	54.0	-19.8
V	9648.000	28.8	33	40.4	36.2	54.0	-17.8
H	12060.000	34.1	33	40.5	41.6	54.0	-12.4
V	14472.000	39.6	33	40.0	46.6	54.0	-7.4

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	76.7	33	27.2	70.9	74.0	-3.1
H	2390.000	67.1	33	29.4	63.5	74.0	-10.5
H	4824.000	52.0	33	34.9	53.9	74.0	-20.1
V	7236.000	42.7	33	37.9	47.6	74.0	-26.4
V	9648.000	42.2	33	40.4	49.6	74.0	-24.4
H	12060.000	47.5	33	40.5	55.0	74.0	-19.0
V	14472.000	53.0	33	40.0	60.0	74.0	-14.0

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 06
Test Date: June 10, 2023

Table 2
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	44.7	33	27.2	38.9	54.0	-15.1
H	4874.000	43.6	33	34.9	45.5	54.0	-8.5
H	7311.000	35.0	33	37.9	39.9	54.0	-14.1
H	9748.000	28.9	33	40.4	36.3	54.0	-17.7
H	12185.000	31.1	33	40.5	38.6	54.0	-15.4
H	14622.000	36.1	33	38.4	41.5	54.0	-12.5

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	79.6	33	27.2	73.8	74.0	-0.2
H	4874.000	50.2	33	34.9	52.1	74.0	-21.9
H	7311.000	45.1	33	37.9	50.0	74.0	-24.0
H	9748.000	42.3	33	40.4	49.7	74.0	-24.3
H	12185.000	44.5	33	40.5	52.0	74.0	-22.0
H	14622.000	49.6	33	38.4	55.0	74.0	-19.0

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 11
Test Date: June 10, 2023

Table 3
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	43.9	33	27.2	38.1	54.0	-15.9
H	2483.500	56.2	33	29.4	52.6	54.0	-1.4
H	4924.000	46.5	33	34.9	48.4	54.0	-5.6
H	7386.000	40.0	33	37.9	44.9	54.0	-9.1
H	9848.000	28.9	33	40.4	36.3	54.0	-17.7
V	12310.000	35.2	33	40.5	42.7	54.0	-11.3
V	14772.000	40.0	33	38.4	45.4	54.0	-8.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	77.0	33	27.2	71.2	74.0	-2.8
H	2483.500	65.6	33	29.4	62.0	74.0	-12.0
H	4924.000	52.5	33	34.9	54.4	74.0	-19.6
H	7386.000	47.8	33	37.9	52.7	74.0	-21.3
H	9848.000	42.3	33	40.4	49.7	74.0	-24.3
V	12310.000	48.6	33	40.5	56.1	74.0	-17.9
V	14772.000	53.4	33	38.4	58.8	74.0	-15.2

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 01
Test Date: June 10, 2023

Table 4
IEEE 802.11g (OFDM, 6 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	41.1	33	27.2	35.3	54.0	-18.7
H	2390.000	53.4	33	29.4	49.8	54.0	-4.2
H	4824.000	32.8	33	34.9	34.7	54.0	-19.3
H	7236.000	32.3	33	37.9	37.2	54.0	-16.8
V	9648.000	28.1	33	40.4	35.5	54.0	-18.5
H	12060.000	34.2	33	40.5	41.7	54.0	-12.3
V	14472.000	39.3	33	40.0	46.3	54.0	-7.7

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	76.3	33	27.2	70.5	74.0	-3.5
H	2390.000	70.0	33	29.4	66.4	74.0	-7.6
H	4824.000	49.4	33	34.9	51.3	74.0	-22.7
H	7236.000	46.0	33	37.9	50.9	74.0	-23.1
V	9648.000	42.0	33	40.4	49.4	74.0	-24.6
H	12060.000	48.1	33	40.5	55.6	74.0	-18.4
V	14472.000	53.2	33	40.0	60.2	74.0	-13.8

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 06
Test Date: June 10, 2023

Table 5
IEEE 802.11g (OFDM, 6 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	43.6	33	27.2	37.8	54.0	-16.2
H	4874.000	32.7	33	34.9	34.6	54.0	-19.4
V	7311.000	32.9	33	37.9	37.8	54.0	-16.2
V	9748.000	28.9	33	40.4	36.3	54.0	-17.7
V	12185.000	31.2	33	40.5	38.7	54.0	-15.3
H	14622.000	36.1	33	38.4	41.5	54.0	-12.5

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	79.5	33	27.2	73.7	74.0	-0.3
H	4874.000	49.5	33	34.9	51.4	74.0	-22.6
V	7311.000	47.3	33	37.9	52.2	74.0	-21.8
V	9748.000	42.6	33	40.4	50.0	74.0	-24.0
V	12185.000	45.2	33	40.5	52.7	74.0	-21.3
H	14622.000	49.9	33	38.4	55.3	74.0	-18.7

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 11
Test Date: June 10, 2023

Table 6
IEEE 802.11g (OFDM, 6 Mbps)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	40.0	33	27.2	34.2	54.0	-19.8
H	2483.500	55.9	33	29.4	52.3	54.0	-1.7
H	4924.000	32.3	33	34.9	34.2	54.0	-19.8
H	7386.000	25.8	33	37.9	30.7	54.0	-23.3
H	9848.000	29.5	33	40.4	36.9	54.0	-17.1
H	12310.000	35.0	33	40.5	42.5	54.0	-11.5
V	14772.000	39.4	33	38.4	44.8	54.0	-9.2

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	77.1	33	27.2	71.3	74.0	-2.7
H	2483.500	71.2	33	29.4	67.6	74.0	-6.4
H	4924.000	47.5	33	34.9	49.4	74.0	-24.6
H	7386.000	39.7	33	37.9	44.6	74.0	-29.4
H	9848.000	43.4	33	40.4	50.8	74.0	-23.2
H	12310.000	48.9	33	40.5	56.4	74.0	-17.6
V	14772.000	53.3	33	38.4	58.7	74.0	-15.3

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 01
Test Date: June 10, 2023

Table 7
IEEE 802.11n (20MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	40.0	33	27.2	34.2	54.0	-19.8
H	2390.000	56.4	33	29.4	52.8	54.0	-1.2
H	4824.000	32.4	33	34.9	34.3	54.0	-19.7
V	7236.000	26.8	33	37.9	31.7	54.0	-22.3
V	9648.000	29.8	33	40.4	37.2	54.0	-16.8
H	12060.000	33.6	33	40.5	41.1	54.0	-12.9
H	14472.000	39.5	33	40.0	46.5	54.0	-7.5

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	76.2	33	27.2	70.4	74.0	-3.6
H	2390.000	76.0	33	29.4	72.4	74.0	-1.6
H	4824.000	50.3	33	34.9	52.2	74.0	-21.8
V	7236.000	40.2	33	37.9	45.1	74.0	-28.9
V	9648.000	43.2	33	40.4	50.6	74.0	-23.4
H	12060.000	47.0	33	40.5	54.5	74.0	-19.5
H	14472.000	52.9	33	40.0	59.9	74.0	-14.1

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

RADIATED EMISSION DATA

Mode: TX-Channel 06
Test Date: June 10, 2023

Table 8
IEEE 802.11n (20MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	45.0	33	27.2	39.2	54.0	-14.8
H	4874.000	32.0	33	34.9	33.9	54.0	-20.1
V	7311.000	29.6	33	37.9	34.5	54.0	-19.5
V	9748.000	28.9	33	40.4	36.3	54.0	-17.7
V	12185.000	31.1	33	40.5	38.6	54.0	-15.4
H	14622.000	36.1	33	38.4	41.5	54.0	-12.5

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	79.1	33	27.2	73.3	74.0	-0.7
H	4874.000	48.9	33	34.9	50.8	74.0	-23.2
V	7311.000	43.3	33	37.9	48.2	74.0	-25.8
V	9748.000	42.4	33	40.4	49.8	74.0	-24.2
V	12185.000	44.4	33	40.5	51.9	74.0	-22.1
H	14622.000	49.4	33	38.4	54.8	74.0	-19.2

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 11
Test Date: June 10, 2023

Table 9
IEEE 802.11n (20MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	40.9	33	27.2	35.1	54.0	-18.9
H	2483.500	56.1	33	29.4	52.5	54.0	-1.5
H	4924.000	30.2	33	34.9	32.1	54.0	-21.9
V	7386.000	27.0	33	37.9	31.9	54.0	-22.1
V	9848.000	28.5	33	40.4	35.9	54.0	-18.1
V	12310.000	34.5	33	40.5	42.0	54.0	-12.0
V	14772.000	41.0	33	38.4	46.4	54.0	-7.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	1593.000	76.6	33	27.2	70.8	74.0	-3.2
H	2483.500	76.7	33	29.4	73.1	74.0	-0.9
H	4924.000	44.1	33	34.9	46.0	74.0	-28.0
V	7386.000	40.4	33	37.9	45.3	74.0	-28.7
V	9848.000	41.9	33	40.4	49.3	74.0	-24.7
V	12310.000	47.9	33	40.5	55.4	74.0	-18.6
V	14772.000	54.4	33	38.4	59.8	74.0	-14.2

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 03
Test Date: June 10, 2023

Table 10
IEEE 802.11n (40MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	40.1	33	27.2	34.3	54.0	-19.7
H	2390.000	55.1	33	29.4	51.5	54.0	-2.5
V	4844.000	26.4	33	34.9	28.3	54.0	-25.7
H	7266.000	28.4	33	37.9	33.3	54.0	-20.7
H	9688.000	27.9	33	40.4	35.3	54.0	-18.7
H	12110.000	28.9	33	40.5	36.4	54.0	-17.6
V	14532.000	35.0	33	38.4	40.4	54.0	-13.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	76.5	33	27.2	70.7	74.0	-3.3
H	2390.000	77.3	33	29.4	73.7	74.0	-0.3
V	4844.000	41.5	33	34.9	43.4	74.0	-30.6
H	7266.000	40.6	33	37.9	45.5	74.0	-28.5
H	9688.000	42.1	33	40.4	49.5	74.0	-24.5
H	12110.000	44.0	33	40.5	51.5	74.0	-22.5
V	14532.000	50.1	33	38.4	55.5	74.0	-18.5

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 06
Test Date: June 10, 2023

Table 11
IEEE 802.11n (40MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	41.1	33	27.2	35.3	54.0	-18.7
V	4874.000	25.4	33	34.9	27.3	54.0	-26.7
H	7311.000	27.4	33	37.9	32.3	54.0	-21.7
H	9748.000	28.9	33	40.4	36.3	54.0	-17.7
H	12185.000	30.9	33	40.5	38.4	54.0	-15.6
H	14622.000	34.0	33	38.4	39.4	54.0	-14.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	78.6	33	27.2	72.8	74.0	-1.2
V	4874.000	39.5	33	34.9	41.4	74.0	-32.6
H	7311.000	40.6	33	37.9	45.5	74.0	-28.5
H	9748.000	41.1	33	40.4	48.5	74.0	-25.5
H	12185.000	44.0	33	40.5	51.5	74.0	-22.5
H	14622.000	49.2	33	38.4	54.6	74.0	-19.4

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: TX-Channel 09
Test Date: June 10, 2023

Table 12
IEEE 802.11n (40MHz) (OFDM, MCS0)

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	41.1	33	27.2	35.3	54.0	-18.7
H	2483.500	53.1	33	29.4	49.5	54.0	-4.5
H	4904.000	26.4	33	34.9	28.3	54.0	-25.7
V	7356.000	26.4	33	37.9	31.3	54.0	-22.7
H	9808.000	26.9	33	40.4	34.3	54.0	-19.7
H	12260.000	28.9	33	40.5	36.4	54.0	-17.6
V	14712.000	33.0	33	38.4	38.4	54.0	-15.6

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	1593.000	77.5	33	27.2	71.7	74.0	-2.3
H	2483.500	71.3	33	29.4	67.7	74.0	-6.3
H	4904.000	39.5	33	34.9	41.4	74.0	-32.6
V	7356.000	40.6	33	37.9	45.5	74.0	-28.5
H	9808.000	40.1	33	40.4	47.5	74.0	-26.5
H	12260.000	42.0	33	40.5	49.5	74.0	-24.5
V	14712.000	48.1	33	38.4	53.5	74.0	-20.5

Notes:
1. Peak detector is used for the emission measurement.
2. Average detector is used for the average data of emission measurement.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.
8. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
9. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

TEST REPORT

RADIATED EMISSION DATA

Mode: Wi-Fi Paring and Charging
Test Date: June 10, 2023

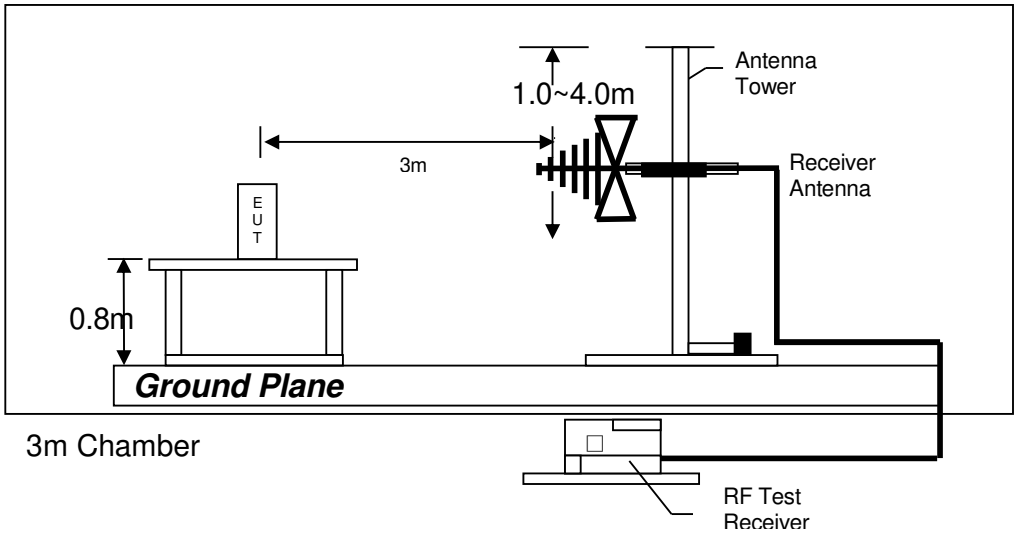
Table 13

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	100.931	35.9	16	12.0	31.9	43.5	-11.6
H	242.673	36.7	16	19.0	39.7	46.0	-6.3
H	408.785	26.9	16	24.0	34.9	46.0	-11.1
H	647.997	31.5	16	29.0	44.5	46.0	-1.5
H	695.997	30.9	16	30.0	44.9	46.0	-1.1
V	743.996	27.6	16	30.0	41.6	46.0	-4.4

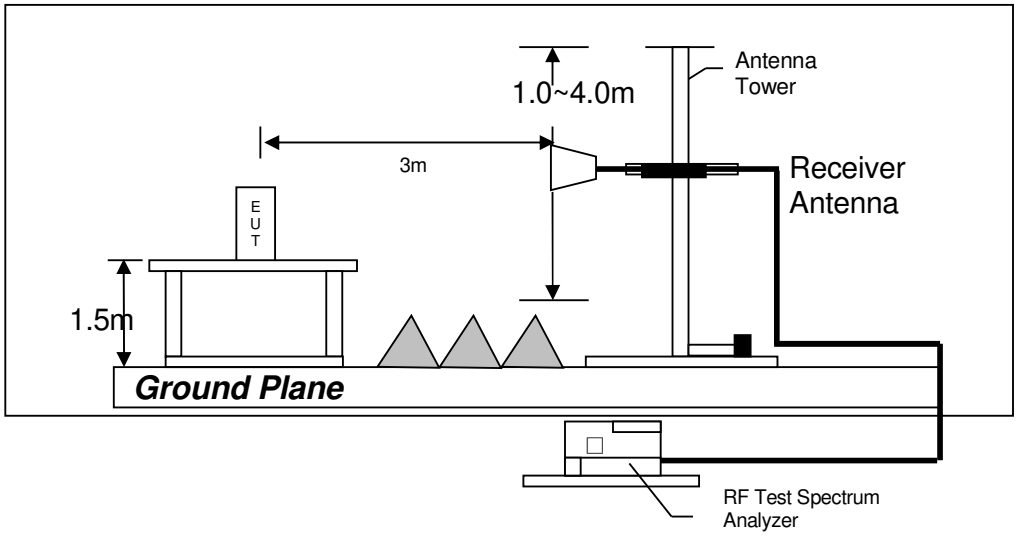
Notes:
1. Quasi-Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.
4. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
5. Measurement Uncertainty is ±5.3dB at a level of confidence of 95%.

4.6.3 Radiated Emission Test Setup

The figure below shows the test setup, which is utilized to make these measurements.



Test setup of radiated emissions up to 1GHz



Test setup of radiated emissions above 1GHz

4.6.4 Transmitter Duty Cycle Calculation

Not applicable – No average factor is required.

4.7 AC Power Line Conducted Emission

☐ Not applicable – EUT is only powered by battery for operation.

☒ EUT connects to AC power line. Emission Data is listed in following pages.

☐ Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

4.7.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

15.360 MHz

The worst-case line conducted configuration photographs are attached in the Appendix and saved with filename: setup photos.pdf

4.7.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

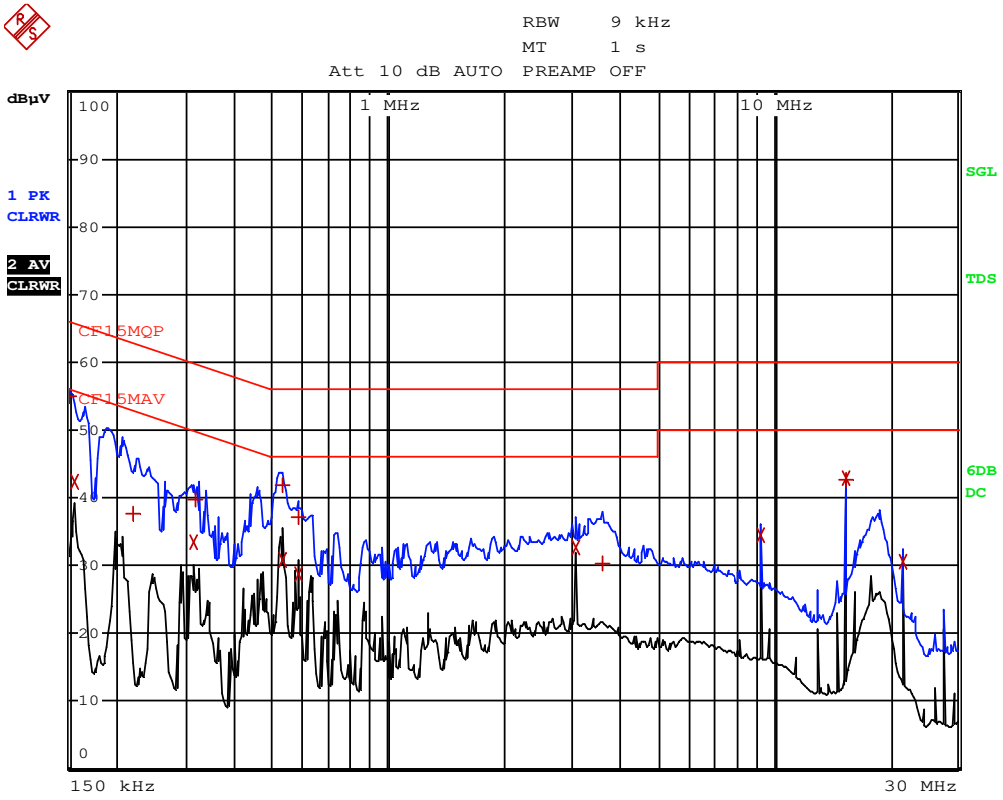
Passed by 7.0 dB margin

TEST REPORT

AC POWER LINE CONDUCTED EMISSION

Worst Case: Wi-Fi Paring and Charging

Test Date: June 18, 2023



TEST REPORT

AC POWER LINE CONDUCTED EMISSION

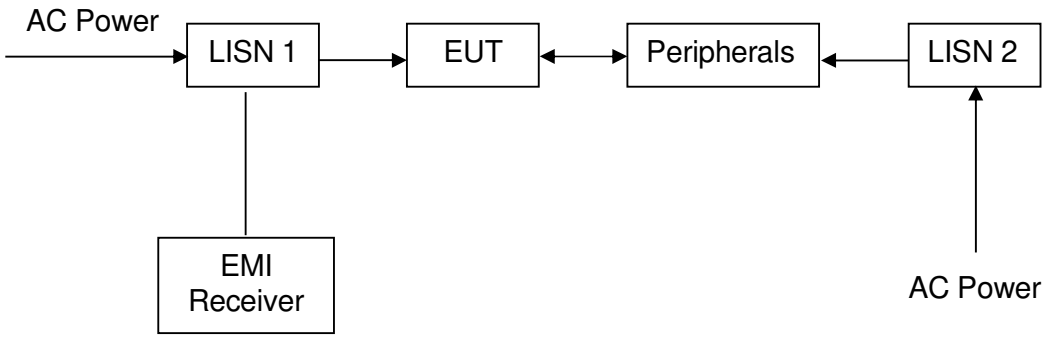
Worst Case: Wi-Fi Paring and Charging
Test Date: June 18, 2023

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	150 kHz	55.06	L1	-10.93
2	CISPR Average	154.5 kHz	42.51	N	-13.23
1	Quasi Peak	222 kHz	37.56	L1	-25.17
2	CISPR Average	312 kHz	33.46	N	-16.45
1	Quasi Peak	321 kHz	39.80	N	-19.87
1	Quasi Peak	532.5 kHz	41.86	N	-14.13
2	CISPR Average	532.5 kHz	30.93	N	-15.06
2	CISPR Average	582 kHz	28.82	L1	-17.17
1	Quasi Peak	586.5 kHz	37.22	L1	-18.77
2	CISPR Average	3.0705 MHz	32.57	N	-13.42
1	Quasi Peak	3.5835 MHz	30.24	N	-25.75
2	CISPR Average	9.2175 MHz	34.53	N	-15.46
1	Quasi Peak	15.36 MHz	42.74	N	-17.25
2	CISPR Average	15.36 MHz	42.96	N	-7.03
2	CISPR Average	21.5025 MHz	30.70	L1	-19.29

4.7.3 Conducted Emission Test Setup



The EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were moved to find the maximum emission.

TEST REPORT

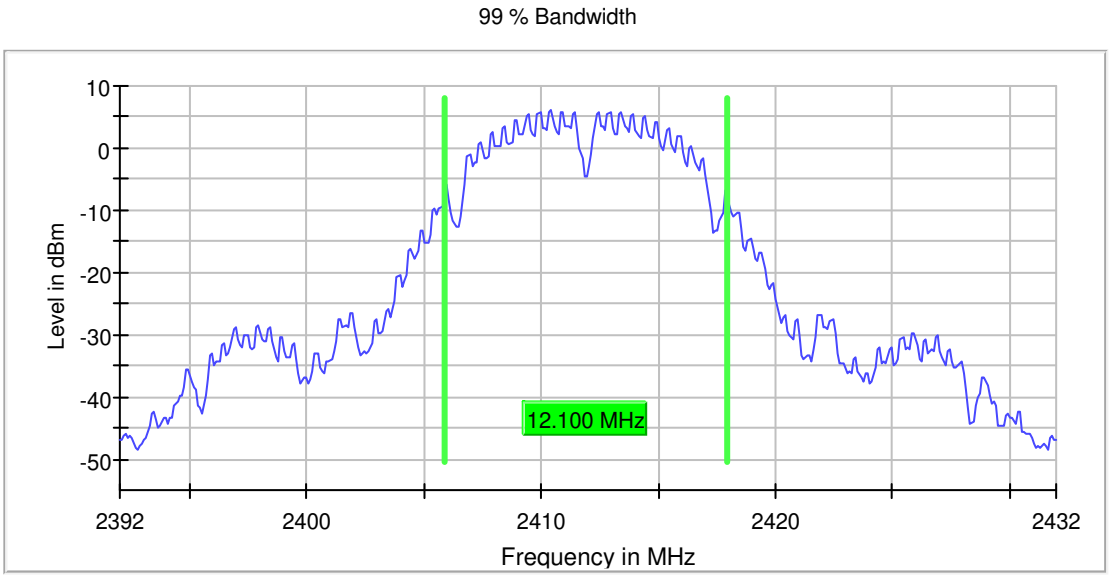
4.8 Occupied Bandwidth

Test Date: November 07, 2023

Occupied Bandwidth Results: (IEEE 802.11b)

Frequency (MHz)		Occupied Bandwidth (MHz)
Low Channel:	2412	12.1
Middle Channel:	2437	12.1
High Channel:	2462	12.1

The worst case is shown as below:

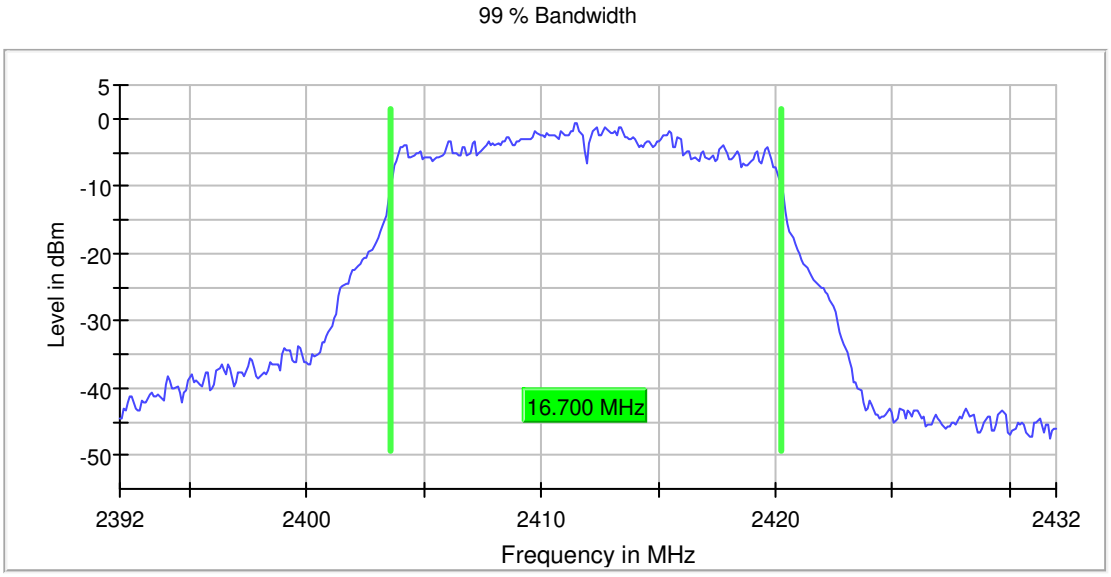


TEST REPORT

Occupied Bandwidth Results: (IEEE 802.11g)

Frequency (MHz)		Occupied Bandwidth (MHz)
Low Channel:	2412	16.7
Middle Channel:	2437	16.6
High Channel:	2462	16.5

The worst case is shown as below:

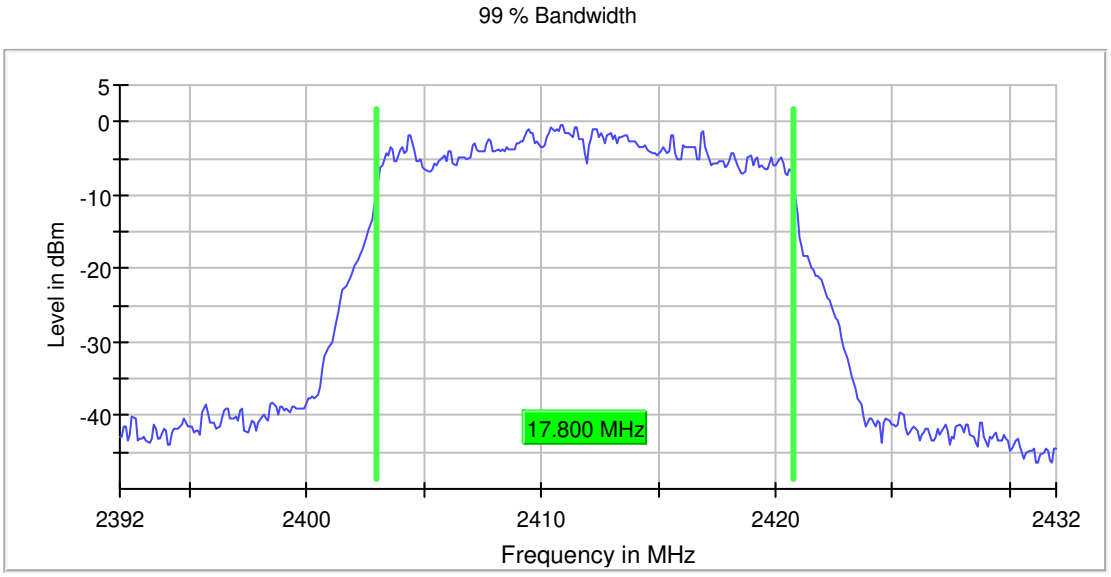


TEST REPORT

Occupied Bandwidth Results: (IEEE 802.11n (20MHz))

Frequency (MHz)		Occupied Bandwidth (MHz)
Low Channel:	2412	17.8
Middle Channel:	2437	17.8
High Channel:	2462	17.6

The worst case is shown as below:

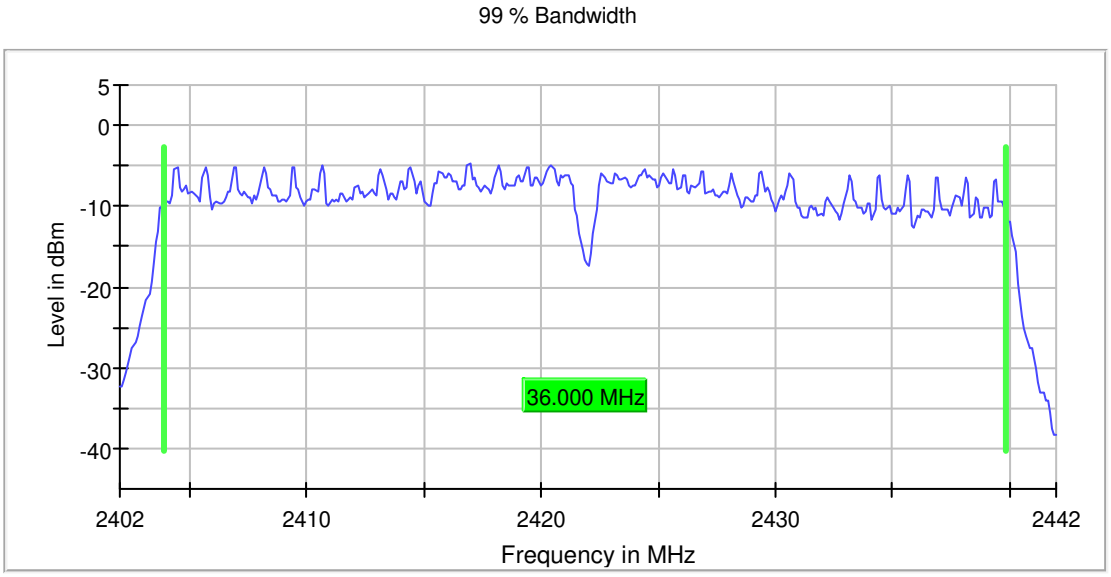


TEST REPORT

Occupied Bandwidth Results: (IEEE 802.11n (40MHz))

Frequency (MHz)		Occupied Bandwidth (MHz)
Low Channel:	2422	36.0
Middle Channel:	2437	36.0
High Channel:	2452	36.0

The worst case is shown as below:



5.0 CONFIDENTIALITY REQUEST

For electronic filing, a preliminary copy of the confidentiality request is saved with filename: request.pdf.

6.0 EQUIPMENT LIST

1) Radiated Emissions Test

Equipment	Signal and Spectrum Analyzer (10Hz to 40GHz)	Biconical Antenna (30MHz to 300MHz)	EMI Test Receiver 7GHz
Registration No.	EW-3016	EW-3242	EW-3603
Manufacturer	ROHDESCHWARZ	EMCO	ROHDESCHWARZ
Model No.	FSV40	3110C	ESR7
Calibration Date	December 13, 2022	May 26, 2021	December 06, 2022
Calibration Due Date	December 13, 2023	August 26, 2023	December 06, 2023

Equipment	Log Periodic Antenna	Double Ridged Guide Antenna (1GHz - 18GHz)	Active Loop H-field (9kHz to 30MHz)
Registration No.	EW-3243	EW-0194	EW-3302
Manufacturer	EMCO	EMCO	EMCO
Model No.	3148B	3115	6502
Calibration Date	June 03, 2021	May 10, 2023	September 08, 2022
Calibration Due Date	September 30, 2023	November 10, 2024	September 08, 2023

Equipment	RF Preamplifier (9kHz to 6000MHz)	2.4GHz Notch Filter	14m Double Shield RF Cable (9kHz - 6GHz)
Registration No.	EW-3006b	EW-3435	EW-2376
Manufacturer	SCHWARZBECK	MICROWAVE	RADIALL
Model No.	BBV9718	N0324413	n m/br56/bnc m 14m
Calibration Date	February 15, 2022	June 16, 2022	January 26, 2022
Calibration Due Date	August 15, 2023	September 16, 2023	October 26, 2023

Equipment	RF Cable 14m (1GHz to 26.5GHz)	14m Double Shield RF Cable (20MHz to 6GHz)	Pyramidal Horn Antenna
Registration No.	EW-2781	EW-2074	EW-0905
Manufacturer	GREATBILLION	RADIALL	EMCO
Model No.	SMA m/SHF5MPU /SMA m ra14m,26G	N(m)-RG142-BNC(m) L=14M	3160-09
Calibration Date	December 12, 2022	December 10, 2021	July 20, 2021
Calibration Due Date	December 12, 2023	September 10, 2023	August 20, 2023

2) Conducted Emissions Test

Equipment	RF Cable 240cm (RG142) (9kHz to 30MHz)	Artificial Mains Network	EMI Test Receiver 7GHz
Registration No.	EW-2454	EW-2501	EW-3481
Manufacturer	RADIALL	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	Bnc m st / 142 / bnc mra 240cm	ENV-216	ESR7
Calibration Date	June 13, 2022	September 11, 2021	December 21, 2021
Calibration Due Date	June 13, 2024	September 11, 2023	September 21, 2023

3) Conductive Measurement Test

Equipment	5m RF Cable (40GHz)	RF Power Meter with Power Sensor (N1921A)	Signal and Spectrum Analyzer (10Hz to 40GHz)
Registration No.	EW-2701	EW-3309	EW-3016
Manufacturer	RADIALL	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	Sma m-m 5m 40G	NRP-Z81	FSV40
Calibration Date	November 24, 2020	February 14, 2022	December 13, 2022
Calibration Due Date	November 24, 2023	February 14, 2024	December 13, 2023

TEST REPORT

4) Control Software for Radiated Emission

Software Information	
Software Name	EMC32
Manufacturer	ROHDESCHWARZ
Software version	10.50.40