

## TEST REPORT

**Report Number: 23040951HKG-007**

Shenzhen Inkbird Technology Co.,Ltd

Application For Certification  
(Original Grant)

**FCC ID: 2AYZD-200WIFI**

**IC: 30368-200**

IHC-200 WIFI Humidity Controller

This report contains the data of Wi-Fi portion only

**Prepared and Checked by:**

**Approved by:**

Signed On File

Leung Chun Ning, Peter  
Engineer

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Wong Cheuk Ho, Herbert  
Assistant Manager  
Date: June 13, 2025

## TEST REPORT

### GENERAL INFORMATION

<b>Applicant Name:</b>	Shenzhen Inkbird Technology Co.,Ltd.
<b>Applicant Address:</b>	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District, Shenzhen, 518000, China
<b>Manufacturer:</b>	Shenzhen Inkbird Technology Co.,Ltd.
<b>Manufacturer Address:</b>	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District, Shenzhen, 518000, China
<b>FCC Specification Standard:</b>	FCC Part 15, October 1, 2023 Edition
<b>FCC ID:</b>	2AYZD-200WIFI
<b>FCC Model(s):</b>	IHC-200-WIFI
<b>IC Specification Standard:</b>	RSS-247 Issue 3, August 2023
<b>IC:</b>	RSS-Gen Issue 5 Amendment 2, February 2021
<b>PMN:</b>	30368-200
<b>HVIN:</b>	Humidity Controller
<b>Type of EUT:</b>	200WIFI
<b>Description of EUT:</b>	Spread Spectrum Transmitter
<b>Sample Receipt Date:</b>	IHC-200 WIFI Humidity Controller
<b>Date of Test:</b>	April 21, 2023
<b>Report Date:</b>	November 21, 2023 to November 29, 2023
<b>Environmental Conditions:</b>	June 13, 2025
<b>Conclusion:</b>	Temperature: +10 to 40°C Humidity: 10 to 90%
	Test was conducted by client submitted sample. The submitted sample as received complied with the 47 CFR Part 15 / RSS-247 Issue 3 Certification.

This report contains the data of Wi-Fi portion only

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## TEST REPORT

### 1.0 TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

#### 1.1 Summary of Test Results

Test Items	FCC Part 15 Section	RSS-247/ RSS-Gen# Section	Results	Details See Section
Antenna Requirement	15.203	7.1.2#	Pass	2.1
Max. Conducted Output Power (Peak)	15.247(b)(3)&(4)	5.4(4)	Pass	4.1
Min. 6dB RF Bandwidth	15.247(a)(2)	5.2(1)	Pass	4.2
Max. Power Density (average)	15.247(e)	5.2(2)	Pass	4.3
Out of Band Antenna Conducted Emission	15.247(d)	5.5	Pass	4.4
Radiated Emission in Restricted Bands and Spurious Emissions	15.247(d), 15.209 & 15.109	5.5	Pass	4.6
AC Power Line Conducted Emission	15.207 & 15.107	7.2.4#	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, 2023 Edition

RSS-247 Issue 3, August 2023

RSS-Gen Issue 5 Amendment 2, February 2021

## TEST REPORT

### 2.0 GENERAL DESCRIPTION

#### 2.1 Product Description

The Equipment Under Test (EUT) is a Wi-Fi and BLE enabled humidity controller designed to provide timed regulation of humidity. The EUT is powered by 120VAC.

For Wi-Fi portion, the Equipment Under Test (EUT) operates at frequency range of 2412MHz to 2462MHz with 11 channels. For BLE Portion, it operates at frequency range of 2402.000 MHz to 2480.000 MHz with 40 channels, the channels are separated with 2MHz spacing.

For 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.

The antenna(s) used in the EUT is integral, and the test sample is a prototype.

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 v05r01 (11-February-2019) All other measurements were made in accordance with the procedures in 47 CFR Part 2 and RSS-Gen Issue 5 Amendment 2, February 2021.

#### 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 and Industry Canada No.: 2042H, Conformity Assessment Body Identifier (CABID) of test facility: HKAP01.

#### 2.4 Related Submittal(s) Grants

This is a single application for certification of a transceiver (Wi-Fi Portion).

## TEST REPORT

### 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 was powered by 120VAC.

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 / RSS-247 2.5. Digital circuitries used to control additional functions other than the operation of the transmitter are subject to FCC Part 15 Section 15.109 / RSS-247 Section 5.5 Limits.

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### 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.

Different data rates have been tested. Worst case is reported only.

All relevant operation modes have been tested, and the worst-case data is included in this report.

For simultaneous transmission, both Wi-Fi and BLE portions are also switched on when taking radiated emission for determining worst-case spurious emission.

### 3.2 EUT Exercising Software

The EUT exercise program (AmebaZ2\_mptool\_1v3) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

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### 3.3 Details of EUT and Description of Accessories

#### Details of EUT:

The EUT is power by 120VAC

#### Description of Accessories:

Description	Remark
1 x 12 ohm resistor	Provided by Intertek

### 3.4 Measurement Uncertainty

Decision Rule for compliance: For FCC/IC standard, the measured value must be within the limits of applicable standard without accounting for the measurement uncertainty. For EN/IEC/HKTA/HKTC standard, conformity rules will be used as per standard directly excepted EN/IEC 61000-3-2, EN/IEC 61000-3-3, HKTA1004, HKCA1008, HKTA1019, HKTA1020, HKTA1041 and HKTA1044.

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.

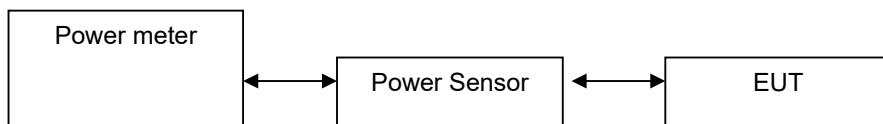
## TEST REPORT

### 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 obtain power at the EUT antenna terminals. The measurement procedure 8.3.2.3 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 = 2.54 dBi (Refer to Test Data.pdf)

Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412 (P.9)	18.1	64.6
Middle Channel: 2437 (P.31)	18.4	69.2
High Channel: 2462 (P.51)	18.2	66.1

Cable loss : 0.5 dB External Attenuation : 0 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 = 18.4 dBm

Limits:

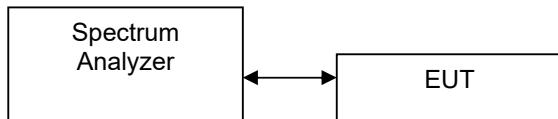
1W (30dBm) for antennas with gains of 6dBi or less

 W ( dBm) for antennas with gains more than 6dBi

## TEST REPORT

### 4.2 Minimum 6dB RF Bandwidth

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 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) (Refer to Test Data.pdf)

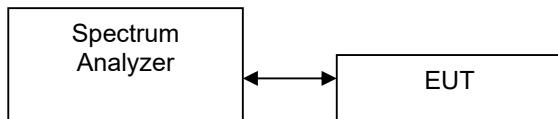
Frequency (MHz)	6dB Bandwidth (MHz)
Low Channel: 2412 (P.4)	9.65
Middle Channel: 2437 (P.29)	9.20
High Channel: 2462 (P.49)	8.20

#### Limits

6 dB bandwidth shall be at least 500kHz

### 4.3 Maximum Power Spectral Density

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



Antenna output of the EUT was coupled directly to spectrum analyzer. The measurement procedure 10.2 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) (Refer to Test Data.pdf)

Frequency (MHz)	PSD in 3kHz (dBm)
Low Channel: 2412 (P.10)	-5.340
Middle Channel: 2437 (P.32)	-3.599
High Channel: 2462 (P.52)	-4.617

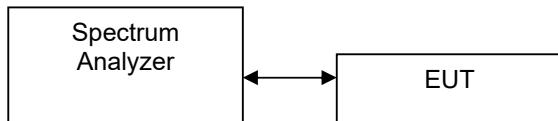
Cable Loss: 0.5 dB

Limit: 8dBm in 3kHz

## TEST REPORT

### 4.4 Out of Band Conducted Emissions

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



For 802.11b, 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 least 20dB below maximum measured in-band peak PSD level in 100 KHz bandwidth for 802.11b.

The measurement procedures under sections 11 of No.558074 D01 v05r01 (11-February-2019) were used.

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

Limits:

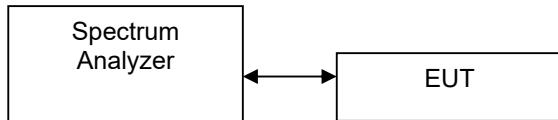
All spurious emission and up to the tenth harmonic was measured and they were found to be at least 20dB below the maximum measured in-band peak PSD level.

IEEE 802.11b (DSSS, 1 Mbps) (Refer to Test Data.pdf)

Frequency (MHz)	Out of Band Conducted Emissions	Band Edge
Low Channel: 2412	P.21	P.15
Middle Channel: 2437	P.38	N/A
High Channel: 2462	P.63	P.57

**TEST REPORT****OCCUPIED BANDWIDTH**

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



Occupied Bandwidth Results: (IEEE 802.11b) (Refer to Test Data.pdf)

Frequency (MHz)	Occupied Bandwidth (MHz)
Low Channel: 2412 (P.7)	14.10
Middle Channel: 2437 (P.27)	14.20
High Channel: 2462 (P.47)	14.10

## TEST REPORT

### 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  $\text{dB}\mu\text{V}/\text{m}$

RA = Receiver Amplitude (including preamplifier) in  $\text{dB}\mu\text{V}$

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  $\text{dB}\mu\text{V}$  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  $\text{dB}\mu\text{V}/\text{m}$ . This value in  $\text{dB}\mu\text{V}/\text{m}$  is converted to its corresponding level in  $\mu\text{V}/\text{m}$ .

RA = 62.0  $\text{dB}\mu\text{V}$

AF = 7.4 dB

CF = 1.6 dB

AG = 29.0 dB

PD = 0.0 dB

AV = -10 dB

$$FS = 62.0 + 7.4 + 1.6 - 29.0 + 0.0 + (-10.0) = 32.0 \text{ dB}\mu\text{V}/\text{m}$$

$$\text{Level in } \mu\text{V}/\text{m} = \text{Common Antilogarithm} [(32.0 \text{ dB}\mu\text{V}/\text{m})/20] = 39.8 \mu\text{V}/\text{m}$$

**TEST REPORT****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

2390.000 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 1-4 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 2.4 dB margin

## TEST REPORT

### RADIATED EMISSION DATA

Mode: TX-Channel 01

Table 1  
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2390.000	55.2	33	29.4	51.6	54.0	-2.4
V	4824.000	33.5	33	34.9	35.4	54.0	-18.6
V	7236.000	31.1	33	37.9	36.0	54.0	-18.0
H	9648.000	32.0	33	40.4	39.4	54.0	-14.6
H	12060.000	32.2	33	40.5	39.7	54.0	-14.3
V	14472.000	35.0	33	40.0	42.0	54.0	-12.0

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2390.000	69.3	33	29.4	65.7	74.0	-8.3
V	4824.000	43.0	33	34.9	44.9	74.0	-29.1
V	7236.000	41.5	33	37.9	46.4	74.0	-27.6
H	9648.000	41.6	33	40.4	49.0	74.0	-25.0
H	12060.000	44.1	33	40.5	51.6	74.0	-22.4
V	14472.000	51.3	33	40.0	58.3	74.0	-15.7

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 meets the requirement of FCC Part 15 Section 15.205 / RSS-Gen Section 8.10.
7. Measurement Uncertainty is  $\pm 5.3$ dB 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.

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Mode: TX-Channel 06

Table 2  
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	4874.000	40.3	33	34.9	42.2	54.0	-11.8
V	7311.000	29.8	33	37.9	34.7	54.0	-19.3
H	9748.000	30.8	33	40.4	38.2	54.0	-15.8
H	12185.000	29.4	33	40.5	36.9	54.0	-17.1
V	14622.000	37.0	33	38.4	42.4	54.0	-11.6

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	4874.000	43.0	33	34.9	44.9	74.0	-29.1
V	7311.000	44.8	33	37.9	49.7	74.0	-24.3
H	9748.000	45.2	33	40.4	52.6	74.0	-21.4
H	12185.000	43.2	33	40.5	50.7	74.0	-23.3
V	14622.000	51.2	33	38.4	56.6	74.0	-17.4

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 meets the requirement of FCC Part 15 Section 15.205 / RSS-Gen Section 8.10.
7. Measurement Uncertainty is  $\pm 5.3$ dB 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.

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Mode: TX-Channel 11

Table 3  
IEEE 802.11b (DSSS, 1 Mbps)

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (average) (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2483.500	52.0	33	29.4	48.4	54.0	-5.6
V	4924.000	36.5	33	34.9	38.4	54.0	-15.6
H	7386.000	30.2	33	37.9	35.1	54.0	-18.9
H	9848.000	28.2	33	40.4	35.6	54.0	-18.4
H	12310.000	29.2	33	40.5	36.7	54.0	-17.3
V	14772.000	34.1	33	38.4	39.5	54.0	-14.5

Polari-zation	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2483.500	67.3	33	29.4	63.7	74.0	-10.3
V	4924.000	45.9	33	34.9	47.8	74.0	-26.2
H	7386.000	44.2	33	37.9	49.1	74.0	-24.9
H	9848.000	40.8	33	40.4	48.2	74.0	-25.8
H	12310.000	45.8	33	40.5	53.3	74.0	-20.7
V	14772.000	51.1	33	38.4	56.5	74.0	-17.5

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 meets the requirement of FCC Part 15 Section 15.205 / RSS-Gen Section 8.10.
7. Measurement Uncertainty is  $\pm 5.3$ dB 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.

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Mode: Wi-Fi and BLE Transmitting

Table 4

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	41.118	32.6	16	10.0	26.6	40.0	-13.4
V	59.818	31.8	16	10.0	25.8	40.0	-14.2
H	102.556	20.4	16	13.0	17.4	43.5	-26.1
H	206.960	13.7	16	17.0	14.7	43.5	-28.8
H	253.280	13.3	16	21.0	18.3	46.0	-27.7
H	327.040	13.1	16	24.0	21.1	46.0	-24.9

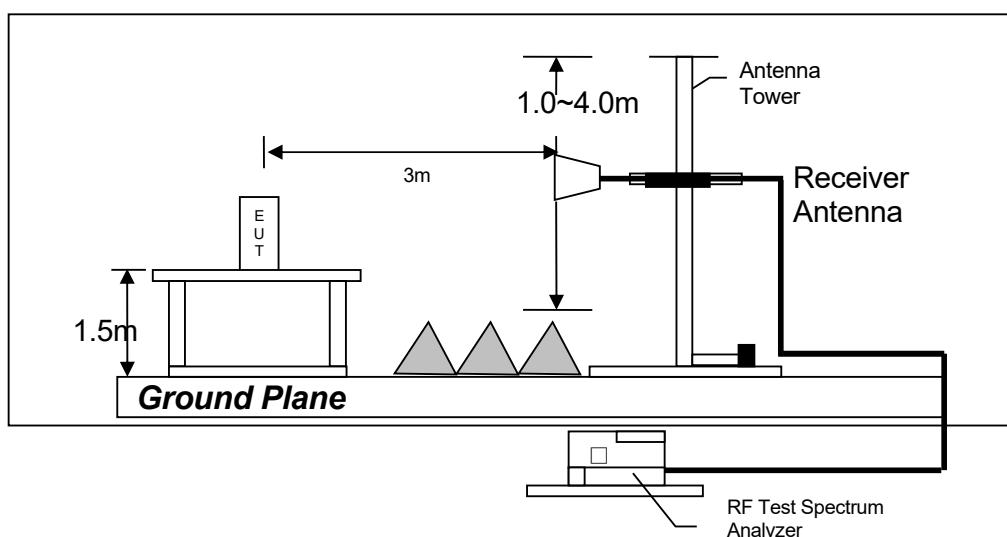
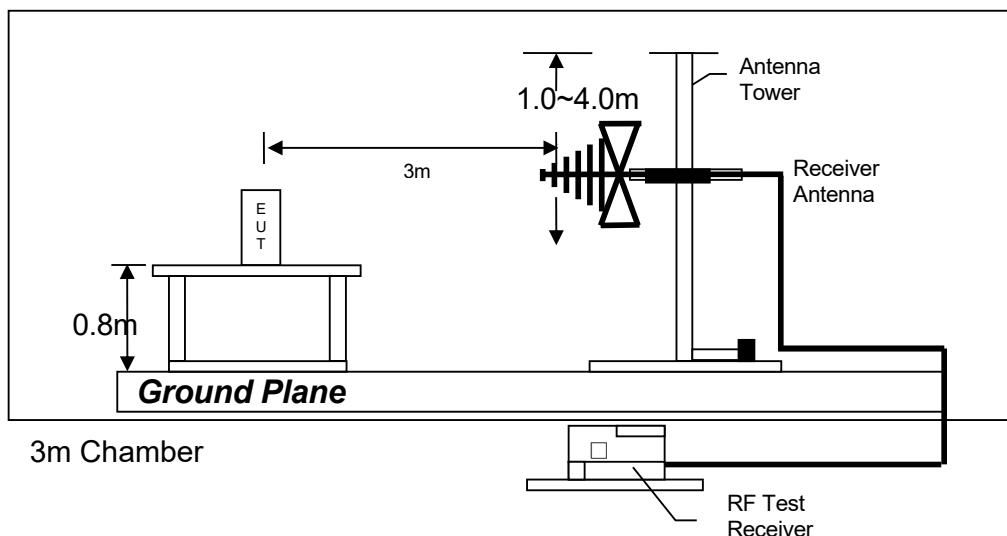
Notes:

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 meets the requirement of FCC Part 15 Section 15.205 / RSS-Gen Section 8.10.
5. Measurement Uncertainty is  $\pm 5.3$ dB at a level of confidence of 95%.

## TEST REPORT

### 4.6.3 Radiated Emission Test Setup

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



**TEST REPORT****4.6.4 Transmitter Duty Cycle Calculation**

Not applicable – No average factor is required.

**TEST REPORT****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

0.465 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**

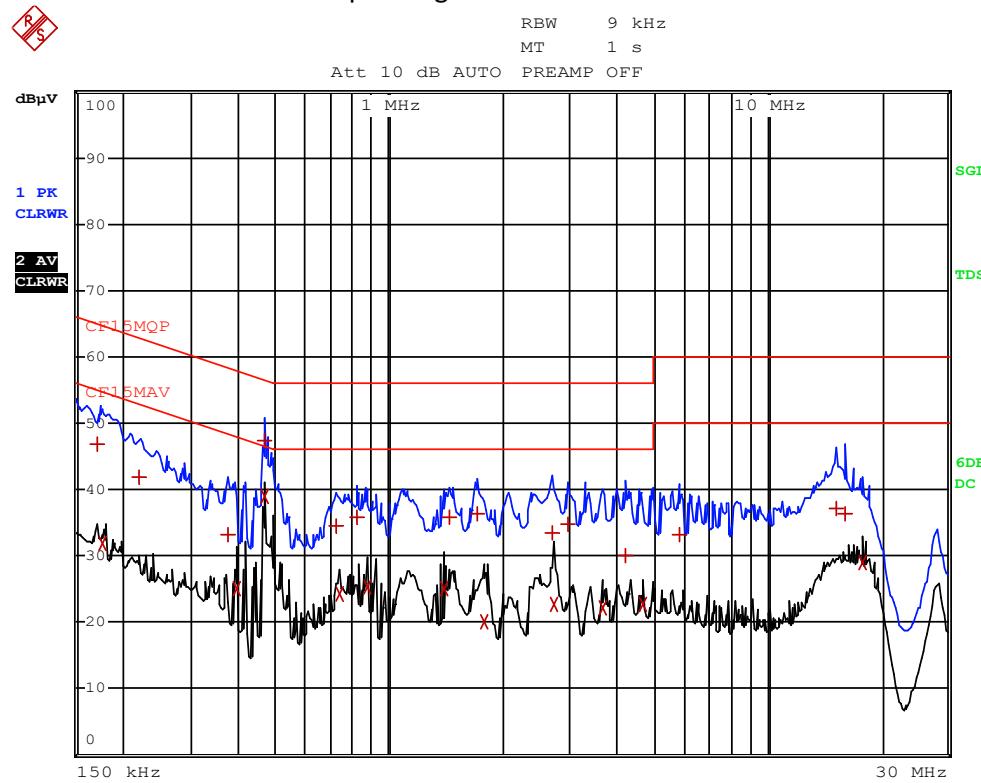
The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

Passed by 7.68 dB margin

## TEST REPORT

### AC POWER LINE CONDUCTED EMISSION

Worst Case: Wi-Fi and BLE Operating



**TEST REPORT****Worst Case: Wi-Fi and BLE Operating**

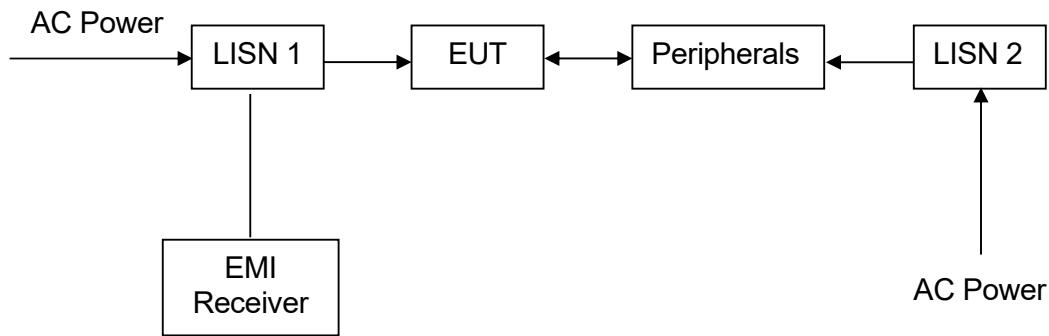
EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL dB $\mu$ V	L1	DELTA	LIMIT dB
1	Quasi Peak 172.5 kHz	46.73	L1	-18.10	
2	CISPR Average 177 kHz	31.98	L1	-22.64	
1	Quasi Peak 222 kHz	41.94	L1	-20.79	
1	Quasi Peak 375 kHz	33.21	L1	-25.17	
2	CISPR Average 393 kHz	25.15	L1	-22.84	
1	Quasi Peak 465 kHz	47.50	L1	-9.09	
2	CISPR Average 465 kHz	38.91	L1	-7.68	
1	Quasi Peak 721.5 kHz	34.41	L1	-21.58	
2	CISPR Average 739.5 kHz	24.17	L1	-21.82	
1	Quasi Peak 825 kHz	35.82	L1	-20.17	
2	CISPR Average 879 kHz	25.39	L1	-20.60	
2	CISPR Average 1.392 MHz	25.19	L1	-20.80	
1	Quasi Peak 1.4415 MHz	35.70	L1	-20.29	
1	Quasi Peak 1.7205 MHz	36.29	L1	-19.70	
2	CISPR Average 1.7835 MHz	20.03	L1	-25.96	
1	Quasi Peak 2.706 MHz	33.48	L1	-22.51	
2	CISPR Average 2.7375 MHz	22.67	L1	-23.32	
1	Quasi Peak 2.985 MHz	34.80	L1	-21.19	
2	CISPR Average 3.687 MHz	22.20	L1	-23.79	
1	Quasi Peak 4.2045 MHz	30.16	L1	-25.83	

**TEST REPORT****Worst Case: Wi-Fi and BLE Operating**

EDIT PEAK LIST (Final Measurement Results)				
TRACE	FREQUENCY	LEVEL dB $\mu$ V	DELTA	LIMIT dB
2 CISPR Average	4.6905 MHz	22.83 L1	-23.16	
1 Quasi Peak	5.8695 MHz	33.30 L1	-26.69	
1 Quasi Peak	15.1755 MHz	37.01 L1	-22.98	
1 Quasi Peak	16.0305 MHz	36.36 L1	-23.63	
2 CISPR Average	17.7855 MHz	29.02 L1	-20.97	

## TEST REPORT

### 4.7.3 Conducted Emission Test Setup



## TEST REPORT

### 5.0 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	February 26, 2024	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	December 30, 2023	November 10, 2024	December 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	February 15, 2024	December 16, 2023	January 26, 2024
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	December 10, 2023	February 20, 2024

## TEST REPORT

### 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	ROHDE SCHWARZ	ROHDE SCHWARZ
Model No.	Bnc m st / 142 / bnc mra 240cm	ENV-216	ESR7
Calibration Date	June 13, 2023	September 11, 2021	December 21, 2021
Calibration Due Date	June 13, 2024	December 11, 2023	December 21, 2023

### 3) Conductive Measurement Test

Equipment	5m RF Cable (40GHz)	RF Power Meter with Power Sensor (N1921A)	EMI Test Receiver 7GHz
Registration No.	EW-2701	EW-3309	EW-3481
Manufacturer	RADIALL	ROHDE SCHWARZ	ROHDE SCHWARZ
Model No.	Sma m-m 5m 40G	NRP-Z81	ESR7
Calibration Date	November 24, 2020	February 14, 2023	December 21, 2021
Calibration Due Date	February 24, 2024	February 14, 2024	December 21, 2023

### 4) Bandedge & Bandwidth Measurement

Equipment	EMI Test Receiver 7GHz	5m RF Cable (40GHz)
Registration No.	EW-3481	EW-2701
Manufacturer	ROHDE SCHWARZ	RADIALL
Model No.	ESR7	Sma m-m 5m 40G
Calibration Date	December 21, 2021	November 24, 2020
Calibration Due Date	December 21, 2023	February 24, 2024

### 5) Control Software for Radiated Emission

Software Information	
Software Name	EMC32
Manufacturer	ROHDE SCHWARZ
Software version	10.50.40

END OF TEST REPORT