

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT

Test Report No. : OT-199-RWD-047

AGR No. : A195A-069

Applicant : BBB Inc.

Address : 28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Manufacturer : BBB Inc.

Address : 28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Type of Equipment : Immunoassay Analyzer

FCC ID : 2AKGP-MB100

Model Name : MB-100

Multiple Model Name : N/A

Serial number : N/A

Total page of Report : 22 pages (including this page)

Date of Incoming : May 13, 2019

Date of Issuing : September 24, 2019

SUMMARY

The equipment complies with the requirements of FCC CFR 47 PART 15 SUBPART C Section 15.225

This test report contains only the result of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production.

Reviewed by:

Ha-Ram Lee / Assistant Manager ONETECH Corp.

Approved by:

Jae-Ho Lee / Chief Engineer ONETECH Corp.

behafu



CONTENTS

2. TEST SUMMARY......6 2.1 Test items and results 6 2.6 Test Facility 6 5. SYSTEM TEST CONFIGURATION8 5.5 CONFIGURATION OF TEST SYSTEM 9 5.6 ANTENNA REQUIREMENT9 6. PRELIMINARY TEST9 7.2 SPURIOUS EMISSION TEST 12

Report No.: OT-199-RWD-047

Page





| 7.3.1 Operating environment | 14 |
|--|----|
| 7.3.2 Test set-up | 14 |
| 7.3.3 Test data | |
| 7.4 FREQUENCY STABILITY WITH TEMPERATURE VARIATION | 16 |
| 7.4.1 Operating environment | |
| 7.4.2 Test set-up | 16 |
| 7.4.3 Test data | 16 |
| 7.5 FREQUENCY STABILITY WITH VOLTAGE VARIATION | 17 |
| 7.5.1 Operating environment | 17 |
| 7.5.2 Test set-up | 17 |
| 7.5.3 Test data | |
| 8. FIELD STRENGTH CALCULATION | 18 |
| 9. CONDUCTED EMISSION TEST | 19 |
| 9.1 OPERATING ENVIRONMENT | 19 |
| 9.2 TEST SET-UP | 19 |
| 9.3 TEST DATA | 20 |
| 10. LIST OF TEST FOLUPMENT | 22 |





REVISION HISTORY

| Issued Report No. | Issued Date | Revisions | Effect Section |
|-------------------|--------------------|---------------|----------------|
| OT-199-RWD-047 | September 24, 2019 | Initial Issue | All |
| | | | |
| | | | |





1. VERIFICATION OF COMPLIANCE

Applicant : BBB Inc.

Address : 28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Contact Person : Jaekyu Choi / CEO
Telephone No. : +82-2-565-9653
FCC ID : 2AKGP-MB100

Model Name : MB-100

Brand Name : Serial Number : N/A

Date : September 24, 2019

| DEVICE TYPE | DXX – Low Power Communication Device Transmitter |
|--------------------------------|--|
| E.U.T. DESCRIPTION | Immunoassay Analyzer |
| THIS REPORT CONCERNS | Original Grant |
| MEASUREMENT PROCEDURES | ANSI C63.10: 2013 |
| TYPE OF EQUIPMENT TESTED | Pre-Production |
| KIND OF EQUIPMENT | |
| AUTHORIZATION REQUESTED | Certification |
| EQUIPMENT WILL BE OPERATED | |
| UNDER FCC RULES PART(S) | FCC CFR47 Part 15 Subpart C Section 15.225 |
| MODIFICATIONS ON THE EQUIPMENT | N. |
| TO ACHIEVE COMPLIANCE | None |
| FINAL TEST WAS CONDUCTED ON | 3 m Semi Anechoic Chamber |

^{-.} The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



2. TEST SUMMARY

2.1 Test items and results

| SECTION | TEST ITEMS | RESULTS |
|--------------------|--|------------------------|
| 15.225 (a),(b),(c) | The field strength of any emissions | Met the Limit / PASS |
| 15.225 (e) | Frequency stability with temperature & voltage variation | Met the Limit / PASS |
| 15.209 | Radiated Emission Limits | Met the Limit / PASS |
| 15.207 | Conducted Limits | Met the Limit / PASS |
| 15.203 | Antenna Requirement | Met requirement / PASS |

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.225.

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-4112/ C-14617/ G-10666 / T-1842

IC (Industry Canada) – Registration No. Site# 3736A-3

-. Site Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013



3. GENERAL INFORMATION

3.1 Product Description

The BBB Inc., Model MB-100 (referred to as the EUT in this report) is a Immunoassay Analyzer, Product specification information described herein was obtained from product data sheet or user's manual.

| Device Type | Immunoassay A | nalyzer | | | |
|---|--------------------------------|---|--|--|--|
| | Bluetooth LE | 2 402 MHz ~ 2 480 MHz | | | |
| | WLAN | 2 412 MHz ~ 2 462 MHz (802.11b/g/n(HT20)) | | | |
| Operating Frequency | 2.4 GHz Band | 2 422 MHz ~ 2 452 MHz (802.11n(HT40)) | | | |
| | NFC | 13.56 MHz | | | |
| | Bluetooth LE | -6.78 dBm | | | |
| RF Output Power | WLAN 2.4 GHz Band | 802.11b (13.13 dBm) 802.11g (10.67 dBm) 802.11n(HT20) (11.01 dBm) | | | |
| | | 802.11n(HT40) (10.81 dBm) | | | |
| | Bluetooth LE | 40 Channels | | | |
| Number of Channel | WLAN 2.4 GHz Band | 11 Channels | | | |
| | NFC | 1 Channel | | | |
| | Bluetooth LE | DSSS Modulation(GFSK) | | | |
| Modulation Type | WLAN | DSSS Modulation(DBPSK/DQPSK/CCK) | | | |
| Woddiation Type | 2.4 GHz Band | OFDM Modulation(BPSK/QPSK/16QAM/64QAM) | | | |
| | NFC | ASK | | | |
| Antenna Type | Bluetooth LE WLAN 2.4 GHz Band | FPC Antenna | | | |
| | NFC | PCB Antenna | | | |
| | Bluetooth LE | | | | |
| Antenna Gain | WLAN | 1.74 dBi | | | |
| | 2.4 GHz Band | | | | |
| List of each Osc. or crystal Freq.(Freq. >= 1 MHz) | 32.768kHz | | | | |
| Rated Supply Voltage | DC 3.8 V | | | | |





3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

| DEVICE TYPE | MANUFACTURER | MODEL/PART NUMBER | FCC ID | | | | | | |
|--------------|--------------|-------------------|--------|--|--|--|--|--|--|
| Main Board | N/A | N/A | - | | | | | | |
| Sub Board | N/A | N/A | - | | | | | | |
| NFC Board | N/A | N/A | | | | | | | |
| Module Board | N/A | N/A | - | | | | | | |
| Display | N/A | N/A | | | | | | | |
| Main Battery | N/A | N/A | | | | | | | |
| Sub Battery | N/A | N/A | - | | | | | | |

5.2 Peripheral equipment

-None

5.3 Mode of operation during the test

-. The EUT has NFC, program was used for making continuous transmission mode during the test.

To get a maximum radiated emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is "XY" axis, but the worst data was recorded in this test report.

5.4 Equipment Modifications

-. None

It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-003 (Rev.2)





5.5 Configuration of Test System

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10:

2013 to determine the worse operating conditions. The radiated emissions measurements

Report No.: OT-199-RWD-047

were performed on the 10 m Semi Anechoic Chamber.

For frequencies from 150 kHz to 30 MHz measurements were made of the magnetic H field.

The measuring antenna is an electrically screened loop antenna.

The frequency spectrum from 30 MHz to 1 000 MHz was scanned and maximum emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

5.6 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The transmitter antenna of the EUT is a PCB antenna so there is no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

| Operation Mode | The Worse operating condition (Please check one only) |
|----------------|---|
| Charging mode | X |

6.2 Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

| Operation Mode | The Worse operating condition (Please check one only) |
|-------------------|---|
| Transmitting Mode | X |

It should not be reproduced except in full, without the written approval of ONETECH Corp.





7. FINAL RESULT OF MEASUREMENT

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level.

7.1 RADIATED EMISSION TEST

7.1.1 Operation frequency band: 13.553 ~ 13.567 MHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 47 % R.H. Temperature: 24 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Type of Test : Low Power Transmitter Operation within the band 1.705-30.0 MHz.

Result : <u>PASSED</u>

EUT : Immunoassay Analyzer Date: September 04, 2019

Operating Condition: Transmitting Mode

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Distance : 3 m

| Radiated | l Emission | Ant | Correctio | n Factors | Total | FCC | |
|-------------|---------------------|------|---------------------------|-----------|--------------------|---|-------|
| Freq. (MHz) | Amplitude (dBµV) | Pol. | Antenna Cable (dB/m) (dB) | | Amplitude (dBμV/m) | $\begin{array}{c c} Limit & Margin \\ (dB\mu V/m) & (dB) \end{array}$ | |
| 13.56 | 15.64 | Н | 19.98 | 1.09 | 36.71 | 124 | 87.29 |
| 13.56 | 9.53 | V | 19.98 | 1.09 | 30.6 | 124 | 93.4 |

Remark. The EUT was tested at 3 m, so conversation factor was included at above limit.

Tested by: Yu-Seog Sim / Assistant Manager

Report No.: OT-199-RWD-047

It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-003 (Rev.2)

Page 11 of 22 Report No.: OT-199-RWD-047

7.1.2 Operation frequency band: Below 13.553 MHz and above 13.567 MHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : <u>47 % R.H.</u> Temperature: <u>24 ℃</u>

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

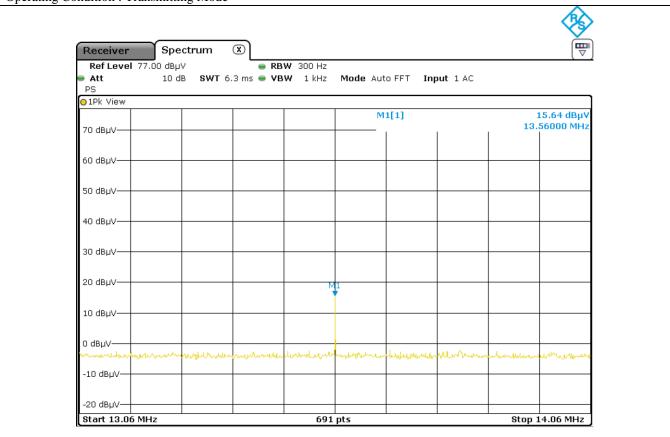
Type of Test : Low Power Transmitter Operation within the band 1.705-30.0 MHz.

Result : <u>PASSED</u>

ONETECH

EUT : Immunoassay Analyzer Date: September 04, 2019

Operating Condition: Transmitting Mode



cc. to above test data, the field strength level of 13.56 MHz is 32.16 dBuV/m and the worst limit subject to 15.225 (b) and (c) is 80.5 dBuV/m, so the EUT meets the requirement.

Tested by: Yu-Seog Sim / Assistant Manager





7.2 SPURIOUS EMISSION TEST

7.2.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 47 % R.H. Temperature: 24 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Type of Test : Low Power Transmitter Operation within the band 1.705-30.0 MHz.

Frequency Range : 9 kHz ~ 30 MHz

Result : <u>PASSED</u>

EUT : Immunoassay Analyzer Date: September 04, 2019

Operating Condition: Transmitting Mode

Distance : 3 m

| Frequency | Reading | Ant. Pol. | Ant. | Angle | Ant. Factor | Cable | Emission | Limits | Margin |
|-----------|---------|-----------|------------|-------|-------------|-------|---------------|---------------|--------|
| (MHz) | (dBµV) | (H/V) | Height (m) | (°) | (dB/m) | Loss | Level(dBµV/m) | $(dB\mu V/m)$ | (dB) |

Any emissions were not observed from the EUT.

Tested by: Yu-Seog Sim / Assistant Manager



Report No.: OT-199-RWD-047

7.2.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Temperature: <u>24 ℃</u> **Humidity Level** : 47 % R.H.

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Type of Test : Low Power Transmitter Operation within the band 1.705-30.0 MHz.

Frequency range : 30 MHz ~ 1 000 MHz

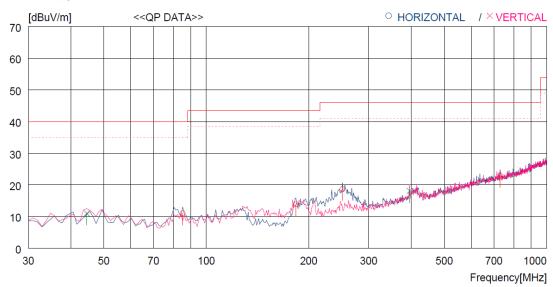
Result : PASSED

ONETECH

EUT : Immunoassay Analyzer Date: September 09, 2019

Operating Condition: Transmitting Mode

Distance : 3 m



| No. | FREQ | READING QP I | ANT FACTOR | LOSS | GAIN | RESULT | LIMIT | MARGIN | ANTENNA | TABLE |
|------------------|---|------------------------------|-----------------------------|--------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------------------|-------------------------|
| | [MHz] | [dBuV] | [dB] | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB] | [cm] | [DEG] |
| H | orizontal - | | | | | | | | | |
| 1 2 3 4 | 85.290 183.260 251.160 729.364 | 31.9 33.5 35.1 29.1 | 9.5 10.1 12.7 20.4 | 2.7 3.4 3.9 6.7 | 33.1 33.1 33.0 33.3 | 11.0 13.9 18.7 22.9 | 40.0 43.5 46.0 46.0 | 29.0 29.6 27.3 23.1 | 300 200 100 200 | 359 74 359 148 |
| Ve | ertical | | | | | | | | | |
| 5 6 | 44.550 395.690 | 27.8 30.6 | 14.5 15.8 | 1.8 4.9 | 33.1 33.2 | 11.0 18.1 | 40.0 46.0 | 29.0 27.9 | 100 100 | 279 106 |

Tested by: Yu-Seog Sim / Assistant Manager





7.3 20 dB BANDWIDTH

7.3.1 Operating environment

Temperature : $24 \, ^{\circ}\text{C}$

Relative humidity : 47 % R.H.

7.3.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 10 kHz, and peak detection was used. The 20 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 20 dB.





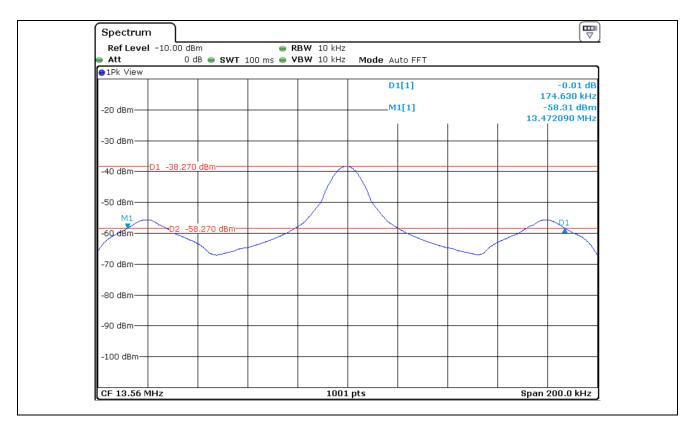


7.3.3 Test data

-. Test Date : September 04, 2019

-. Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

| Operating Freq. (MHz) | Measured Value (kHz) | Assigned Operating Frequency Band (kHz) | Result |
|-----------------------|----------------------|---|--------|
| 13.56 | 174.63 | 900 | PASS |



Tested by: Yu-Seog Sim / Assistant Manager





7.4 FREQUENCY STABILITY WITH TEMPERATURE VARIATION

7.4.1 Operating environment

Temperature : $24 \, ^{\circ}\text{C}$

Relative humidity : 47 % R.H.

7.4.2 Test set-up

Turn EUT off and set chamber temperature to -20 °C and then allow sufficient time (approximately 20 to 30 minutes after chamber reach the assigned temperature) for EUT to stabilize. Turn ON EUT and measure the EUT operating frequency and then turn off the EUT after the measurement. The temperature in the chamber was raised 10 °C step from -20 °C to +50 °C. Repeat above method for frequency measurements every 10 °C step and then record all measured frequencies on each temperature step.

7.4.3 Test data

-. Test Date : September 04, 2019

-. Result : PASSED

| Temperature (°C) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Margin (Hz) | Limit (Hz) |
|------------------|--------------------|---------------------|-------------|------------|
| -20 | | 13 560 112 | 112 | |
| -10 | | 13 560 097 | 97 | |
| 0 | | 13 560 075 | 75 | |
| 10 | 10.500.000 | 13 560 068 | 68 | 1 256 00 |
| 20 | 13 560 000 | 13 560 051 | 51 | ± 1 356.00 |
| 30 | | 13 560 048 | 48 | |
| 40 | | 13 560 067 | 67 | |
| 50 | | 13 560 075 | 75 | |

Tested by: Yu-Seog Sim / Assistant Manager





7.5 FREQUENCY STABILITY WITH VOLTAGE VARIATION

7.5.1 Operating environment

Temperature : $24 \, ^{\circ}\text{C}$

Relative humidity : 47 % R.H.

7.5.2 Test set-up

An external DC power supply was connected to the input of the EUT. The voltage of EUT set to 115 % of the nominal value and then was reduced to 85 % of nominal voltage. The output frequency was recorded at each step.

7.5.3 Test data

-. Test Date : September 04, 2019

-. Result : <u>PASSED</u>

| Voltage (Vdc) | Carrier Freq. (Hz) | Measured Freq. (Hz) | Margin (Hz) | Limit (Hz) |
|---------------|--------------------|---------------------|-------------|------------|
| 4.37(115 %) | | 13 560 056 | 56 | |
| 3.80(100 %) | 13 560 000 | 13 560 048 | 48 | ± 1356.00 |
| 3.23(85 %) | | 13 560 078 | 78 | |

Tested by: Yu-Seog Sim / Assistant Manager





8. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses.

| + Meter reading | $(\text{dB}\mu V)$ |
|-----------------------|--------------------------|
| - Amplifier Gain | (dB) |
| + Cable Loss | (dB) |
| - Antenna Factor | (dB/m) |
| = Corrected Result | $\left(dB\mu V/m\right)$ |
| | |
| Margin (dB) | |
| Specification Limit | (dBuV/m) |
| - Corrected Result | (dBuV/m) |
| = dB Relative to Spec | |





9. CONDUCTED EMISSION TEST

9.1 Operating environment

Temperature : $24 \, ^{\circ}\text{C}$

Relative humidity : 45 % R.H

9.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.



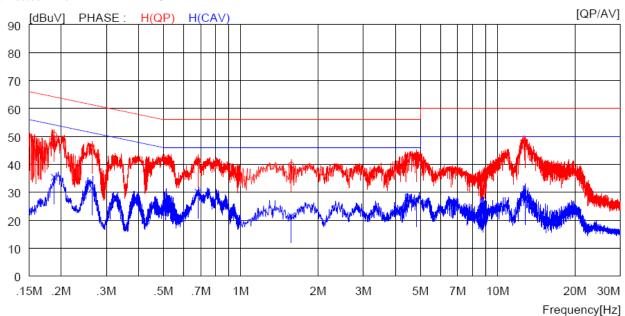
9.3 Test data

-. Test Date : September 03, 2019

-. Resolution bandwidth : 9 kHz

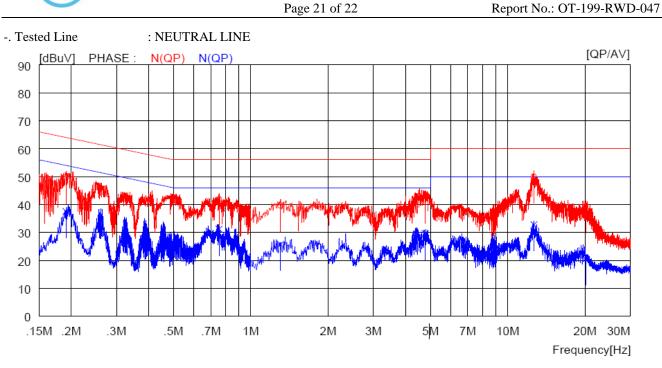
-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



| NO | FREQ | READ | ING | C.FACTOR | RES | ULT | LIM | TIT | MAI | RGIN | PHASE |
|----|----------|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------|
| | [MHz] | QP [dBuV] | AV [dBuV] | [dB] | QP [dBuV] | AV [dBuV] | QP [dBuV] | AV [dBuV] | QP [dBuV] | AV [dBuV] | |
| | | | | | | | | | | | |
| 1 | 0.18800 | 40.4 | | 10.1 | 50.5 | | 64.1 | | 13.6 | | H(QP) |
| 2 | 0.26400 | 36.2 | | 10.1 | 46.3 | | 61.3 | | 15.0 | | H(QP) |
| 3 | 0.68200 | 31.3 | | 10.1 | 41.4 | | 56.0 | | 14.6 | | H(QP) |
| 4 | 1.57200 | 29.7 | | 10.1 | 39.8 | | 56.0 | | 16.2 | | H(QP) |
| 5 | 4.83600 | 33.1 | | 10.1 | 43.2 | | 56.0 | | 12.8 | | H(QP) |
| 6 | 12.79000 | 37.9 | | 10.3 | 48.2 | | 60.0 | | 11.8 | | H(QP) |
| 7 | 0.18800 | | 25.3 | 10.1 | | 35.4 | | 54.1 | | 18.7 | H(CAV) |
| 8 | 0.26400 | | 21.3 | 10.1 | | 31.4 | | 51.3 | | 19.9 | H(CAV) |
| 9 | 0.68200 | | 20.0 | 10.1 | | 30.1 | | 46.0 | | 15.9 | H(CAV) |
| 10 | 1.57200 | | 11.4 | 10.1 | | 21.5 | | 46.0 | | 24.5 | H(CAV) |
| 11 | 4.83600 | | 17.1 | 10.1 | | 27.2 | | 46.0 | | 18.8 | H(CAV) |
| 12 | 12.79000 | | 17.7 | 10.3 | | 28.0 | | 50.0 | | 22.0 | H(CAV) |





| | NO | FREQ | READ | ING | C.FACTOR | RES | ULT | LIM | IIT | MAF | RGIN | PHASE |
|---|-----|----------|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|---------------|--------|
| | | [MHz] | QP [dBuV] | AV [dBuV] | [dB] | QP [dBuV] | AV [dBuV] | QP [dBuV] | AV [dBuV] | QP [dBuV] | AV [dBuV] | |
| | 1 | 0.19100 | 39.7 | | 10.1 | 49.8 | | 64.0 | | 14.2 | | N(QP) |
| | 2 | 0.75300 | 31.8 | | 10.1 | 41.9 | | 56.0 | | 14.1 | | N(QP) |
| | 3 | 1.30400 | 29.6 | | 10.1 | 39.7 | | 56.0 | | 16.3 | | N(QP) |
| | 4 | 4.76400 | 32.8 | | 10.1 | 42.9 | | 56.0 | | 13.1 | | N(QP) |
| | 5 | 12.63000 | 39.7 | | 10.3 | 50.0 | | 60.0 | | 10.0 | | N(QP) |
| | 6 | 20.09000 | 28.8 | | 10.4 | 39.2 | | 60.0 | | 20.8 | | N(QP) |
| | 7 | 0.19100 | | 27.5 | 10.1 | | 37.6 | | 54.0 | | 16.4 | N(CAV) |
| | 8 | 0.75300 | | 21.1 | 10.1 | | 31.2 | | 46.0 | | 14.8 | N(CAV) |
| | 9 | 1.30400 | | 15.7 | 10.1 | | 25.8 | | 46.0 | | 20.2 | N(CAV) |
| 1 | L O | 4.76400 | | 19.5 | 10.1 | | 29.6 | | 46.0 | | 16.4 | N(CAV) |
| 1 | 11 | 12.63000 | | 22.5 | 10.3 | | 32.8 | | 50.0 | | 17.2 | N(CAV) |
| 1 | L2 | 20.09000 | | 10.2 | 10.4 | | 20.6 | | 50.0 | | 29.4 | N(CAV) |

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Yu-Seog Sim / Assistant Manager



10. LIST OF TEST EQUIPMENT

| No. | EQUIPMENTS | MFR. | MODEL | SER. NO. | LAST CAL | DUE CAL | USE |
|-----|--------------------------|----------------------|---------------------------|---------------------------|---------------|----------|-----|
| 1. | | R/S | ESCI | 101012 | Oct. 22, 2018 | One Year | |
| 2. | Test receiver | R/S | ESR | 101470 | Oct. 22, 2018 | One Year | |
| 3. | Spectrum analyzer | R/S | FSV30 | 101200 | Jul. 24, 2019 | One Year | |
| 4. | Amplifier | Sonoma Instrument | 310N | 312544 | Mar. 18, 2019 | One Year | |
| 5. | Amplifier | Sonoma Instrument | 310N | 312545 | Mar. 18, 2019 | One Year | |
| 6. | BBV 9718 B | Schwarzbeck | Broadband Preamplifier | 009 | Mar. 18, 2019 | One Year | • |
| 7. | TRILOG Broadband Antenna | Schwarzbeck | VULB9163 | 9163-255 | Jun. 05, 2018 | Two Year | |
| 8. | TRILOG Broadband Antenna | Schwarzbeck | VULB9163 | 9163-419 | Aug. 09, 2018 | Two Year | |
| 9. | Controller | Innco System | CO3000 | CO3000/904/ 37211215/L | N/A | N/A | |
| | | EMCO | 3825/2 | 9109-1869 | Mar 19, 2019 | One Year | |
| 10. | LISN | Schwarzbeck | NSLK8126 | 8126-480 | Oct. 22, 2018 | One Year | |
| | | Schwarzbeck | NSLK8126 | 8128-479 | Oct. 22, 2018 | One Year | |
| 11. | Turn Table | Innco System | DT3000-3t | N/A | N/A | N/A | |
| 12. | Antenna Master | Innco System | MA-4000XPET | MA4000/509/ 37211215/L | N/A | N/A | • |
| 13. | Antenna Master | Innco System | MA4000-EP | MA4000/332/ 27030611/L | N/A | N/A | |
| 14. | Loop Antenna | Schwarzbeck | FMZB 1513 | 1513-235 | May. 13, 2018 | Two Year | |
| 15. | Frequency Counter | HP | 53152A | US39270295 | Jul. 25, 2019 | One Year | |
| 16. | Chamber | ESPEC | PSL-2KP | 14009407 | Feb. 22, 2019 | One Year | |
| 17. | DC Power Supply | Protek | PWS-3003D | 4020409 | Jul. 24, 2019 | One Year | |
| 18 | Test Receiver | R/S | ESCI | 101420 | Mar. 28, 2019 | One Year | |
| 19 | AMN | EMCO | 3825/2 | 9109-1867 | Mar. 27, 2019 | One Year | |
| 20 | LISN | Schwarzbeck | NSLK8126 | 8126-480 | Oct. 22, 2018 | One Year | |
| 21 | Transient Limiter | Hewlett Packard | 11947A | 3107A02762 | Mar. 28, 2019 | One Year | |