

# **FCC Test Report**

Report No.: RFBCBS-WTW-P20120492

FCC ID: K7SWIZ010

Test Model: WIZ010

Received Date: Dec. 15, 2020

Test Date: Dec. 16 ~ Dec. 17, 2020

**Issued Date:** Dec. 30, 2020

Applicant: Belkin International, Inc.

Address: 12045 East Waterfront Drive, Playa Vista, CA 90094

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City

33383, TAIWAN

FCC Registration / 788550 / TW0003

**Designation Number:** 





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Report No.: RFBCBS-WTW-P20120492 Page No. 1 / 46 Report Format Version: 6.1.1



## **Table of Contents**

| R | eleas   | e Control Record  | 3   |
|---|---|---|---|
| 1 | (   | Certificate of Conformity   | 4   |
| 2 | ;   | Summary of Test Results   | 5   |
|   | 2.1<br>2.2  | Measurement Uncertainty   |   |
| 3 | (   | General Information   | 6   |
|   | 3.1<br>3.2<br>3.2.1<br>3.3<br>3.3.1<br>3.4  | Description of Support Units  Configuration of System under Test  General Description of Applied Standards  | 6<br>7<br>8<br>8  |
| 4 | 7   | Test Types and Results  | 10  |
|   | 4.1.2<br>4.1.3<br>4.1.4<br>4.1.5<br>4.1.6<br>4.1.7<br>4.2.1<br>4.2.2<br>4.2.3<br>4.2.4<br>4.2.5<br>4.2.6<br>4.2.7 | Radiated Emission and Bandedge Measurement Limits of Radiated Emission and Bandedge Measurement Test Instruments Test Procedures Deviation from Test Standard Test Set Up EUT Operating Conditions Test Results Conducted Emission Measurement Limits of Conducted Emission Measurement Test Instruments Test Procedures Deviation from Test Standard Test Setup EUT Operating Conditions. Test Results | 10<br>.11<br>12<br>12<br>13<br>14<br>15<br>35<br>35<br>36<br>36<br>36<br>36<br>37 |
| 5 |   | Pictures of Test Arrangementsdix – Information of the Testing Laboratories  |   |
| μ | ppen  | uix – iniormation of the Testing Laboratories   | 40  |



## **Release Control Record**

| Issue No.            | Description      | Date Issued   |
|----------------------|------------------|---------------|
| RFBCBS-WTW-P20120492 | Original release | Dec. 30, 2020 |



## **Certificate of Conformity**

**Product**: BOOST↑CHARGE™ PRO 2-in-1 Wireless Charger Stand with MagSafe

Brand: belkin

Test Model: WIZ010

Sample Status: Engineering sample

**Applicant:** Belkin International, Inc.

**Test Date:** Dec. 16 ~ Dec. 17, 2020

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.209)

ANSI C63.10: 2013

The above equipment has been tested by Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Polly Chien / Specialist Dec. 30, 2020

Approved by:

Bruce Chen / Senior Project Engineer



## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.209) |                             |        |  |  |  |
|--|-----------------------------|--------|--|--|--|
| FCC<br>Clause                                  | Test Item                   | Result | Remarks  |  |  |
| 15.207   | AC Power Conducted Emission | Pass   | Meet the requirement of limit. Minimum passing margin is -17.54dB at 1.79925MHz. |  |  |
| 15.209   | Radiated Emission Test      | Pass   | Meet the requirement of limit. Minimum passing margin is -6.6dB at 56.71MHz      |  |  |

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

## 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement                        | Frequency        | Expanded Uncertainty (k=2) (±) |
|------------------------------------|------------------|--------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz   | 2.94 dB                        |
|                                    | 9kHz ~ 30MHz     | 3.04 dB                        |
| Radiated Emissions up to 1 GHz     | 30MHz ~ 200MHz   | 3.86 dB                        |
|                                    | 200MHz ~ 1000MHz | 3.87 dB                        |

## 2.2 Modification Record

There were no modifications required for compliance.



## 3 General Information

## 3.1 General Description of EUT

| Product                             | BOOST↑CHARGE™ PRO 2-in-1 Wireless Charger Stand with MagSafe      |  |  |
|-------------------------------------|---|--|--|
| Brand                               | belkin  |  |  |
| Test Model                          | WIZ010  |  |  |
| Sample Status                       | Engineering sample  |  |  |
| Power Supply Rating                 | 15Vdc (adapter)   |  |  |
| Modulation Type                     | FSK   |  |  |
| Operating Fraguency                 | 360.0kHz  |  |  |
| Operating Frequency                 | 111-148kHz  |  |  |
|                                     | Coil antenna  |  |  |
| Antonna Typa                        | (The Antenna information is declared by manufacturer and for more |  |  |
| Antenna Type                        | detailed features description, please refer to the manufacturer's |  |  |
|                                     | specifications, the laboratory shall not be held responsible)     |  |  |
| Field Strongth                      | 360.0kHz: -28.3dBuV/m   |  |  |
| Field Strength                      | 147.9kHz: -7.3dBuV/m  |  |  |
| Dimension for iPhone charging coil  | 12.12cm² (Diameter = 39.3mm)                                      |  |  |
| Dimension for AirPods charging coil | 15.20cm² (Diameter = 44mm)  |  |  |
| Accessory Device                    | Refer to Note as below  |  |  |
| Data Cable Supplied                 | Refer to Note as below  |  |  |
| Maximum Power Output for            | 15W   |  |  |
| iPhone charging coil                | 1300  |  |  |
| Maximum Power Output for            | 5W  |  |  |
| AirPods charging coil               | OVV   |  |  |

Note: The EUT uses following adapter.

| itete. The Eet deed tellewing adapter. |  |  |  |
|--|--|--|--|
| Brand                                  | belkin   |  |  |
| Model                                  | 2ACR040G NJ, 2ACR040G EU, 2ACR040G AU, 2ACR040G UK |  |  |
| Input Power                            | 100-240Vac, 50/60Hz, 1.3A Max                      |  |  |
| Output Power                           | 15Vdc, 2.67A                                       |  |  |
| Power Line                             | 1.5m DC cable without core attached on adapter     |  |  |

## 3.2 Description of Test Modes

2 channels are provided to this EUT

| Channel | Freq. (kHz) |
|---------|-------------|
| 1       | 360.0       |
| 2       | 147.9       |



#### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT configure       | Applicable to |              | Description   |  |
|---------------------|---------------|--------------|---|--|
| mode                | RE<1G         | PLC          | Description   |  |
| Α                   | √ √           |              | Charging Mode (EUT wireless charging to iPhone)             |  |
| В                   | В √ √         |              | Charging Mode (EUT wireless charging to AirPods)            |  |
| C \ \ \ \ \ \ \ \ C |               | $\checkmark$ | Charging Mode (EUT wireless charging to iPhone and AirPods) |  |
| D √ √ §             |               | $\checkmark$ | Standby Mode  |  |

Where **RE<1G:** Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

Note: The EUT is designed to be positioned on the X-plane only.

### Radiated Emission Test (Below 1GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel |
|--------------------|-------------------|----------------|
| A                  | 1, 2              | 1              |
| В                  | 1, 2              | 2              |
| С                  | 1, 2              | 1, 2           |
| D                  | 1, 2              | 1, 2           |

#### **Power Line Conducted Emission Test:**

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel |
|--------------------|-------------------|----------------|
| А                  | 1, 2              | 1              |
| В                  | 1, 2              | 2              |
| С                  | 1, 2              | 1, 2           |
| D                  | 1, 2              | 1, 2           |

#### **Test Condition:**

| Applicable To | Environmental Conditions | Input Power  | Tested by  |
|---------------|--------------------------|--------------|------------|
| RE<1G         | 23 deg. C, 67% RH        | 120Vac, 60Hz | Adair Peng |
| PLC           | 23 deg. C, 67% RH        | 120Vac, 60Hz | Adair Peng |



## 3.3 Description of Support Units

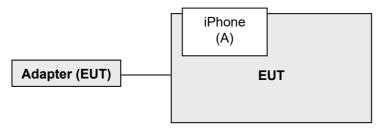
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product | Brand | Model No.              | Serial No. | FCC ID | Remarks                  |
|----|---------|-------|------------------------|------------|--------|--------------------------|
| A. | iPhone  | APPLE | A2407                  | NA         | NA     | Provided by manufacturer |
| В. | AirPods | APPLE | A2031, A2032,<br>A1938 | NA         | NA     | Provided by manufacturer |

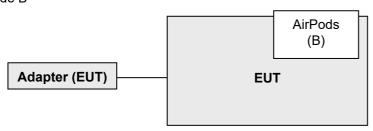
## 3.3.1 Configuration of System under Test

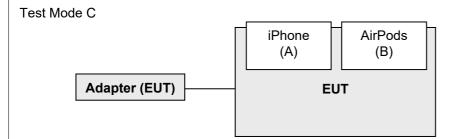
## **Charging Mode:**

Test Mode A



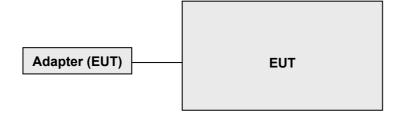
Test Mode B





## Standby Mode:

Test Mode D





# 3.4 **General Description of Applied Standards** The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards: FCC Part 15, Subpart C (15.209) ANSI C63.10-2013 All test items have been performed and recorded as per the above standards.



# 4 Test Types and Results

# 4.1 Radiated Emission and Bandedge Measurement

## 4.1.1 Limits of Radiated Emission and Bandedge Measurement

## FOR FREQUENCY BELOW 30MHz

| Frequency     | Field Streng    | th (dBuV/m) | Measurement Distance |
|---------------|-----------------|-------------|----------------------|
| (MHz)         | uV/m            | dBuV/m      | (meters)             |
| 0.009 - 0.490 | 2400 / F (kHz)  | 48.52-13.80 | 300                  |
| 0.490 – 1.705 | 24000 / F (kHz) | 33.80-22.97 | 30                   |
| 1.705 – 30.0  | 30              | 29.54       | 30                   |

## FOR FREQUENCY BETWEEN 30-1000MHz

| OKTINEQUEITOT BETTTEEN OF TOTALIE |         |          |                 |        |  |  |  |  |
|-----------------------------------|---------|----------|-----------------|--------|--|--|--|--|
| Frequency                         | Class A | (at 10m) | Class B (at 3m) |        |  |  |  |  |
| (MHz)                             | uV/m    | dBuV/m   | uV/m            | dBuV/m |  |  |  |  |
| 30-88                             | 90      | 39.1     | 100             | 40.0   |  |  |  |  |
| 88-216                            | 150     | 43.5     | 150             | 43.5   |  |  |  |  |
| 216-960                           | 210     | 46.4     | 200             | 46.0   |  |  |  |  |
| Above 960                         | 300     | 49.5     | 500             | 54.0   |  |  |  |  |



## 4.1.2 Test Instruments

| Description & Manufacturer                | Model No.                             | Serial No.                      | Cal. Date     | Cal. Due      |
|---|---------------------------------------|---------------------------------|---------------|---------------|
| Test Receiver ROHDE & SCHWARZ             | ESR3                                  | 102579                          | Jul. 07, 2020 | Jul. 06, 2021 |
| BILOG Antenna<br>SCHWARZBECK              | VULB9168                              | 9168-171                        | Nov. 04, 2020 | Nov. 03, 2021 |
| HORN Antenna<br>SCHWARZBECK               | 9120D                                 | 209                             | Nov. 24, 2019 | Dec. 30, 2020 |
| HORN Antenna<br>SCHWARZBECK               | BBHA 9170                             | BBHA9170241                     | Nov. 24, 2019 | Dec. 30, 2020 |
| Loop Antenna<br>TESEQ                     | HLA 6121                              | 45745                           | Jul. 06, 2020 | Jul. 05, 2021 |
| Preamplifier<br>Agilent<br>(Below 1GHz)   | 8447D                                 | 2944A10738                      | Aug. 16, 2020 | Aug. 15, 2021 |
| Preamplifier<br>Agilent<br>(Above 1GHz)   | 8449B                                 | 3008A02465                      | Mar. 23, 2020 | Mar. 22, 2021 |
| RF Coaxial Cable<br>WOKEN<br>With 5dB PAD | 8D-FB                                 | Cable-CH3-01                    | Aug. 16, 2020 | Aug. 15, 2021 |
| RF signal cable<br>HUBER+SUHNER           | SUCOFLEX 104                          | Cable-CH3-03<br>(223653/4)      | Aug. 16, 2020 | Aug. 15, 2021 |
| RF signal cable<br>HUBER+SUHNER&<br>EMCI  | SUCOFLEX<br>104&EMC104-SM-S<br>M-8000 | Cable-CH3-03<br>(309224+170907) | Aug. 16, 2020 | Aug. 15, 2021 |
| Software<br>BV ADT                        | ADT_Radiated_<br>V7.6.15.9.5          | NA                              | NA            | NA            |
| Antenna Tower<br>inn-co GmbH              | MA 4000                               | 013303                          | NA            | NA            |
| Antenna Tower Controller BV ADT           | AT100                                 | AT93021702                      | NA            | NA            |
| Turn Table<br>BV ADT                      | TT100                                 | TT93021702                      | NA            | NA            |
| Turn Table Controller BV ADT              | SC100                                 | SC93021702                      | NA            | NA            |
| Boresight Antenna Fixture                 | FBA-01                                | FBA-SIP01                       | NA            | NA            |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

<sup>2.</sup> The test was performed in HwaYa Chamber 3.



#### 4.1.3 Test Procedures

#### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and Ground-Parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

#### Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

#### For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

#### Note:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
- 4. All modes of operation were investigated and the worst-case emissions are reported.

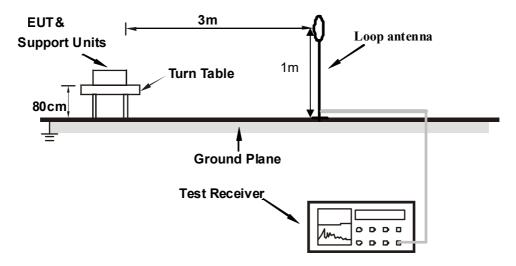
#### 4.1.4 Deviation from Test Standard

No deviation.

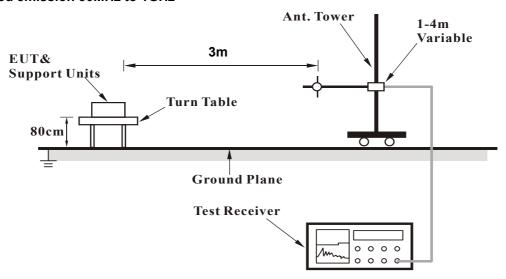


## 4.1.5 Test Set Up

## For Radiated emission below 30MHz



## For Radiated emission 30MHz to 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).



## 4.1.6 EUT Operating Conditions

## **Charging Mode:**

## Test Mode A

- a. The EUT powered by adapter.
- b. Put the iPhone on the EUT (wireless charging) during the test.

#### Test Mode B

- a. The EUT powered by adapter.
- b. Put the AirPods on the EUT (wireless charging) during the test.

#### Test Mode C

- a. The EUT powered by adapter.
- b. Put the iPhone and AirPods on the EUT (wireless charging) during the test.

## Standby Mode:

## Test Mode D

a. The EUT powered by adapter.



#### 4.1.7 Test Results

#### Below 30MHz Data:

#### **Charging Mode**

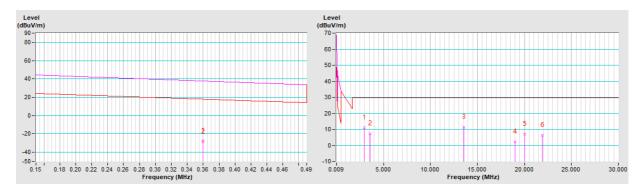
| Channel         | TX Channel 1   |                   | Average (AV)                 |
|-----------------|----------------|-------------------|------------------------------|
| Frequency Range | 9 kHz ~ 30 MHz | Detector Function | Peak (PK)<br>Quasi-Peak (QP) |
| Test Mode       | A              |                   |                              |

|     | Antenna Polarity & Test Distance: Loop antenna Parallel at 3m |          |            |        |         |          |        |            |  |
|-----|---|----------|------------|--------|---------|----------|--------|------------|--|
|     | Freq.   | Emission | Limit      | Margin | Antenna | Table    | Raw    | Correction |  |
| No. | (MHz)   | Level    | (dBuV/m)   | •      | Height  | Angle    | Value  | Factor     |  |
|     | (IVITIZ)  | (dBuV/m) | (ubuv/III) | (dB)   | (m)     | (Degree) | (dBuV) | (dB/m)     |  |
| 1   | *0.3600   | -27.2 PK | 36.5       | -63.7  | 1.00    | 320      | 33.0   | -60.2      |  |
| 2   | *0.3600   | -28.7 AV | 16.5       | -45.2  | 1.00    | 320      | 31.5   | -60.2      |  |
| 3   | 2.9646  | 11.1 QP  | 29.5       | -18.4  | 1.00    | 78       | 31.8   | -20.7      |  |
| 4   | 3.5731  | 7.4 QP   | 29.5       | -22.1  | 1.00    | 157      | 27.9   | -20.5      |  |
| 5   | 13.5701   | 11.5 QP  | 29.5       | -18.0  | 1.00    | 12       | 30.2   | -18.7      |  |
| 6   | 19.0033   | 2.2 QP   | 29.5       | -27.3  | 1.00    | 8        | 20.6   | -18.4      |  |
| 7   | 20.0030   | 7.0 QP   | 29.5       | -22.5  | 1.00    | 259      | 25.4   | -18.4      |  |
| 8   | 21.9155   | 6.2 QP   | 29.5       | -23.3  | 1.00    | 165      | 24.6   | -18.4      |  |

#### Remarks:

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m =  $40*\log(3/300)$  = -80dB

For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40\*log(3/30) = -40dB

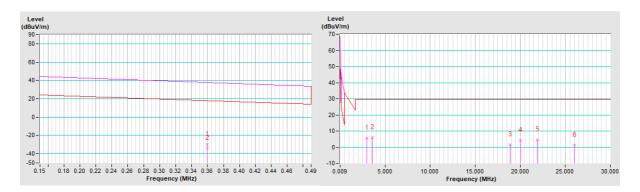




| Channel         | TX Channel 1   |                   | Average (AV)    |
|-----------------|----------------|-------------------|-----------------|
| Frequency Range | 9 kHz ~ 30 MHz | Detector Function | Peak (PK)       |
|                 |                |                   | Quasi-Peak (QP) |
| Test Mode       | A              |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m |          |             |        |         |          |        |            |  |
|-----|--|----------|-------------|--------|---------|----------|--------|------------|--|
|     | Freq.  | Emission | Limit       | Margin | Antenna | Table    | Raw    | Correction |  |
| No. | (MHz)  | Level    | (dBuV/m)    | (dB)   | Height  | Angle    | Value  | Factor     |  |
|     | (1011 12)  | (dBuV/m) | (dbd v/iii) | (GD)   | (m)     | (Degree) | (dBuV) | (dB/m)     |  |
| 1   | *0.3600  | -30.1 PK | 36.5        | -66.6  | 1.00    | 11       | 30.1   | -60.2      |  |
| 2   | *0.3600  | -33.7 AV | 16.5        | -50.2  | 1.00    | 11       | 26.5   | -60.2      |  |
| 3   | 2.9646   | 5.6 QP   | 29.5        | -23.9  | 1.00    | 309      | 26.3   | -20.7      |  |
| 4   | 3.5731   | 6.0 QP   | 29.5        | -23.5  | 1.00    | 174      | 26.5   | -20.5      |  |
| 5   | 18.8729  | 1.5 QP   | 29.5        | -28.0  | 1.00    | 9        | 19.9   | -18.4      |  |
| 6   | 20.0030  | 4.1 QP   | 29.5        | -25.4  | 1.00    | 218      | 22.5   | -18.4      |  |
| 7   | 21.9155  | 4.5 QP   | 29.5        | -25.0  | 1.00    | 141      | 22.9   | -18.4      |  |
| 8   | 26.0012  | 1.1 QP   | 29.5        | -28.4  | 1.00    | 300      | 19.4   | -18.3      |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49 \text{MHz}$ , the measured field strength was extrapolated to distance 300 meters Distance factor@3m =  $40*\log(3/300)$  = -80 dB
  - For  $0.49 \sim 30 \text{MHz}$ , the measured field strength was extrapolated to distance 30 meters Distance factor@3m =  $40 \cdot \log(3/30) = -40 \cdot dB$

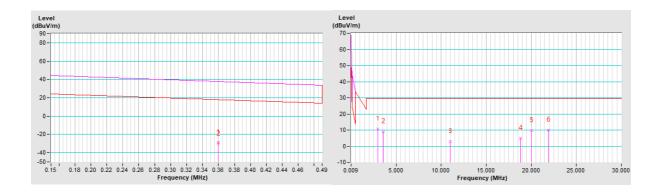




| Channel         | TX Channel 1   |                   | Average (AV)    |
|-----------------|----------------|-------------------|-----------------|
| _               |                | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz |                   | Quasi-Peak (QP) |
| Test Mode       | A              |                   |                 |

|      | Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m |                |          |        |                   |                |              |                      |  |
|------|--|----------------|----------|--------|-------------------|----------------|--------------|----------------------|--|
| No.  | Freq.  | Emission Limit | Limit    | Margin | Antenna<br>Height | Table<br>Angle | Raw<br>Value | Correction<br>Factor |  |
| 140. | (MHz)  | (dBuV/m)       | (dBuV/m) | (dB)   | (m)               | (Degree)       | (dBuV)       | (dB/m)               |  |
| 1    | *0.3600  | -28.9 PK       | 36.5     | -65.4  | 1.00              | 311            | 31.3         | -60.2                |  |
| 2    | *0.3600  | -30.7 AV       | 16.5     | -47.2  | 1.00              | 311            | 29.5         | -60.2                |  |
| 3    | 2.9646   | 10.6 QP        | 29.5     | -18.9  | 1.00              | 227            | 31.3         | -20.7                |  |
| 4    | 3.5731   | 9.0 QP         | 29.5     | -20.5  | 1.00              | 340            | 29.5         | -20.5                |  |
| 5    | 11.0057  | 2.9 QP         | 29.5     | -26.6  | 1.00              | 179            | 21.7         | -18.8                |  |
| 6    | 18.7860  | 4.9 QP         | 29.5     | -24.6  | 1.00              | 12             | 23.3         | -18.4                |  |
| 7    | 20.0030  | 9.6 QP         | 29.5     | -19.9  | 1.00              | 139            | 28.0         | -18.4                |  |
| 8    | 21.9155  | 10.1 QP        | 29.5     | -19.4  | 1.00              | 100            | 28.5         | -18.4                |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB

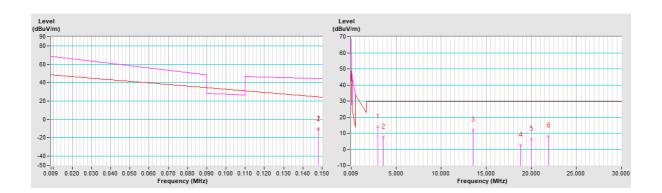




| Channel         | TX Channel 2   |                   | Average (AV)    |
|-----------------|----------------|-------------------|-----------------|
| F               | 9 kHz ~ 30 MHz | Detector Function | Peak (PK)       |
| Frequency Range |                |                   | Quasi-Peak (QP) |
| Test Mode       | В              |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Parallel at 3m |          |            |        |         |          |        |            |  |
|-----|---|----------|------------|--------|---------|----------|--------|------------|--|
|     | Freq.   | Emission | Limit      | Margin | Antenna | Table    | Raw    | Correction |  |
| No. | (MHz)   | Level    | (dBuV/m)   |        | Height  | Angle    | Value  | Factor     |  |
|     | (IVITIZ)  | (dBuV/m) | (ubuv/III) | (dB)   | (m)     | (Degree) | (dBuV) | (dB/m)     |  |
| 1   | *0.1479   | -10.1 PK | 44.2       | -54.3  | 1.00    | 158      | 50.5   | -60.6      |  |
| 2   | *0.1479   | -10.7 AV | 24.2       | -34.9  | 1.00    | 158      | 49.9   | -60.6      |  |
| 3   | 2.9646  | 14.0 QP  | 29.5       | -15.5  | 1.00    | 4        | 34.7   | -20.7      |  |
| 4   | 3.5731  | 7.6 QP   | 29.5       | -21.9  | 1.00    | 15       | 28.1   | -20.5      |  |
| 5   | 13.5701   | 12.0 QP  | 29.5       | -17.5  | 1.00    | 151      | 30.7   | -18.7      |  |
| 6   | 18.8294   | 2.5 QP   | 29.5       | -27.0  | 1.00    | 351      | 20.9   | -18.4      |  |
| 7   | 20.0030   | 6.4 QP   | 29.5       | -23.1  | 1.00    | 259      | 24.8   | -18.4      |  |
| 8   | 21.9155   | 8.2 QP   | 29.5       | -21.3  | 1.00    | 241      | 26.6   | -18.4      |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49 \text{MHz}$ , the measured field strength was extrapolated to distance 300 meters Distance factor@3m =  $40*\log(3/300)$  = -80 dB

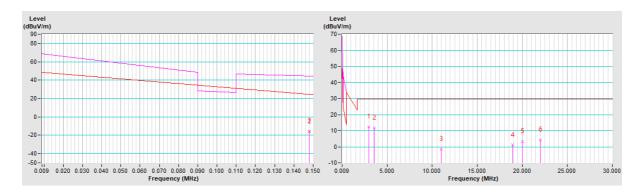




| Channel         | TX Channel 2   |                   | Average (AV)    |
|-----------------|----------------|-------------------|-----------------|
| _               |                | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz |                   | Quasi-Peak (QP) |
| Test Mode       | В              |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m |                   |          |        |                   |                |              |                      |
|-----|--|-------------------|----------|--------|-------------------|----------------|--------------|----------------------|
| No. | Freq.  | Emission<br>Level | Limit    | Margin | Antenna<br>Height | Table<br>Angle | Raw<br>Value | Correction<br>Factor |
|     | (MHz)  | (dBuV/m)          | (dBuV/m) | (dB)   | (m)               | (Degree)       | (dBuV)       | (dB/m)               |
| 1   | *0.1479  | -15.5 PK          | 44.2     | -59.7  | 1.00              | 277            | 45.1         | -60.6                |
| 2   | *0.1479  | -16.1 AV          | 24.2     | -40.3  | 1.00              | 277            | 44.5         | -60.6                |
| 3   | 2.9646   | 12.4 QP           | 29.5     | -17.1  | 1.00              | 66             | 33.1         | -20.7                |
| 4   | 3.5731   | 11.7 QP           | 29.5     | -17.8  | 1.00              | 57             | 32.2         | -20.5                |
| 5   | 11.0057  | -1.4 QP           | 29.5     | -30.9  | 1.00              | 325            | 17.4         | -18.8                |
| 6   | 18.9598  | 1.0 QP            | 29.5     | -28.5  | 1.00              | 128            | 19.4         | -18.4                |
| 7   | 20.0030  | 3.1 QP            | 29.5     | -26.4  | 1.00              | 59             | 21.5         | -18.4                |
| 8   | 22.0024  | 4.4 QP            | 29.5     | -25.1  | 1.00              | 114            | 22.8         | -18.4                |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB

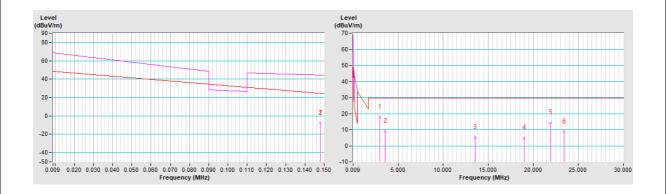




| Channel         | TX Channel 2   |                   | Average (AV)    |
|-----------------|----------------|-------------------|-----------------|
|                 |                | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz |                   | Quasi-Peak (QP) |
| Test Mode       | В              |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m |          |               |        |          |        |        |            |
|-----|--|----------|---------------|--------|----------|--------|--------|------------|
|     | Freq.  | Emission | Limit         | Margin | Antenna  | Table  | Raw    | Correction |
| No. | (MHz)  | Level    |               | _      | Height   | Angle  | Value  | Factor     |
|     | (IVITIZ)   | (dBuV/m) | (dBuV/m) (dB) | (m)    | (Degree) | (dBuV) | (dB/m) |            |
| 1   | *0.1479  | -7.6 PK  | 44.2          | -51.8  | 1.00     | 191    | 53.0   | -60.6      |
| 2   | *0.1479  | -8.1 AV  | 24.2          | -32.3  | 1.00     | 191    | 52.5   | -60.6      |
| 3   | 2.9646   | 17.7 QP  | 29.5          | -11.8  | 1.00     | 21     | 38.4   | -20.7      |
| 4   | 3.5731   | 8.9 QP   | 29.5          | -20.6  | 1.00     | 4      | 29.4   | -20.5      |
| 5   | 13.5701  | 5.3 QP   | 29.5          | -24.2  | 1.00     | 57     | 24.0   | -18.7      |
| 6   | 19.0033  | 5.0 QP   | 29.5          | -24.5  | 1.00     | 233    | 23.4   | -18.4      |
| 7   | 21.9155  | 14.3 QP  | 29.5          | -15.2  | 1.00     | 206    | 32.7   | -18.4      |
| 8   | 23.4368  | 8.8 QP   | 29.5          | -20.7  | 1.00     | 16     | 27.1   | -18.3      |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB

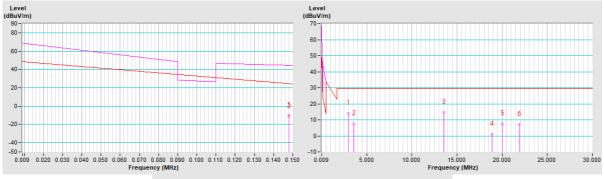


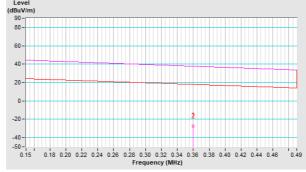


| Channel         | TX Channel 1 + 2 |                   | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
| _               |                  | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz   |                   | Quasi-Peak (QP) |
| Test Mode       | С                |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Parallel at 3m |                   |                   |                |                   |                |              |                      |
|-----|---|-------------------|-------------------|----------------|-------------------|----------------|--------------|----------------------|
| No. | Freq.<br>(MHz)  | Emission<br>Level | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height | Table<br>Angle | Raw<br>Value | Correction<br>Factor |
|     | , ,   | (dBuV/m)          | , ,               |                | (m)               | (Degree)       | (dBuV)       | (dB/m)               |
| 1   | *0.1479   | -9.9 PK           | 44.2              | -54.1          | 1.00              | 178            | 50.7         | -60.6                |
| 2   | *0.1479   | -11.4 AV          | 24.2              | -35.6          | 1.00              | 178            | 49.2         | -60.6                |
| 3   | *0.3600   | -26.9 PK          | 36.5              | -63.4          | 1.00              | 277            | 33.3         | -60.2                |
| 4   | *0.3600   | -28.3 AV          | 16.5              | -44.8          | 1.00              | 277            | 31.9         | -60.2                |
| 5   | 2.9646  | 14.2 QP           | 29.5              | -15.3          | 1.00              | 303            | 34.9         | -20.7                |
| 6   | 3.5731  | 7.5 QP            | 29.5              | -22.0          | 1.00              | 127            | 28.0         | -20.5                |
| 7   | 13.5701   | 14.9 QP           | 29.5              | -14.6          | 1.00              | 231            | 33.6         | -18.7                |
| 8   | 18.8729   | 1.1 QP            | 29.5              | -28.4          | 1.00              | 6              | 19.5         | -18.4                |
| 9   | 20.0030   | 7.5 QP            | 29.5              | -22.0          | 1.00              | 242            | 25.9         | -18.4                |
| 10  | 21.9155   | 7.2 QP            | 29.5              | -22.3          | 1.00              | 326            | 25.6         | -18.4                |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB



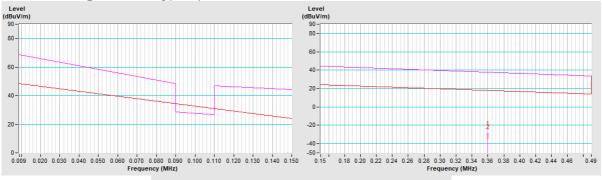


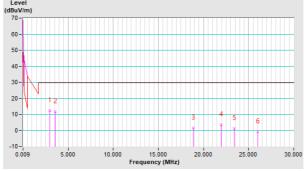


| Channel         | TX Channel 1 + 2 |                   | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
| _               |                  | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz   |                   | Quasi-Peak (QP) |
| Test Mode       | С                |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | *0.1479  | -16.5 PK                      | 44.2              | -60.7          | 1.00                     | 274                        | 44.1                   | -60.6                          |
| 2   | *0.1479  | -17.6 AV                      | 24.2              | -41.8          | 1.00                     | 274                        | 43.0                   | -60.6                          |
| 3   | *0.3600  | -29.7 PK                      | 36.5              | -66.2          | 1.00                     | 27                         | 30.5                   | -60.2                          |
| 4   | *0.3600  | -33.2 AV                      | 16.5              | -49.7          | 1.00                     | 27                         | 27.0                   | -60.2                          |
| 5   | 2.9646   | 12.4 QP                       | 29.5              | -17.1          | 1.00                     | 108                        | 33.1                   | -20.7                          |
| 6   | 3.5731   | 11.6 QP                       | 29.5              | -17.9          | 1.00                     | 235                        | 32.1                   | -20.5                          |
| 7   | 18.8729  | 1.4 QP                        | 29.5              | -28.1          | 1.00                     | 136                        | 19.8                   | -18.4                          |
| 8   | 21.9589  | 3.7 QP                        | 29.5              | -25.8          | 1.00                     | 247                        | 22.1                   | -18.4                          |
| 9   | 23.4368  | 1.3 QP                        | 29.5              | -28.2          | 1.00                     | 113                        | 19.6                   | -18.3                          |
| 10  | 26.0012  | -0.8 QP                       | 29.5              | -30.3          | 1.00                     | 354                        | 17.5                   | -18.3                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m =  $40*\log(3/300)$  = -80dB



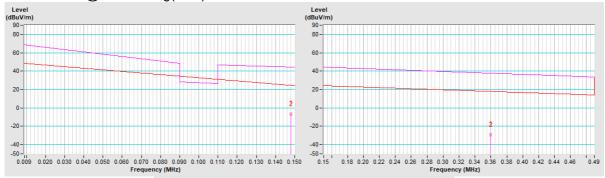


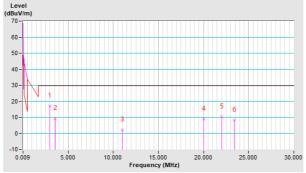


| Channel         | TX Channel 1 + 2 |                   | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
|                 | 0.111            | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz   |                   | Quasi-Peak (QP) |
| Test Mode       | С                |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | *0.1479  | -6.1 PK                       | 44.2              | -50.3          | 1.00                     | 191                        | 54.5                   | -60.6                          |
| 2   | *0.1479  | -7.3 AV                       | 24.2              | -31.5          | 1.00                     | 191                        | 53.3                   | -60.6                          |
| 3   | *0.3600  | -28.5 PK                      | 36.5              | -65.0          | 1.00                     | 293                        | 31.7                   | -60.2                          |
| 4   | *0.3600  | -30.1 AV                      | 16.5              | -46.6          | 1.00                     | 293                        | 30.1                   | -60.2                          |
| 5   | 2.9646   | 17.2 QP                       | 29.5              | -12.3          | 1.00                     | 29                         | 37.9                   | -20.7                          |
| 6   | 3.5731   | 9.2 QP                        | 29.5              | -20.3          | 1.00                     | 282                        | 29.7                   | -20.5                          |
| 7   | 11.0057  | 2.3 QP                        | 29.5              | -27.2          | 1.00                     | 307                        | 21.1                   | -18.8                          |
| 8   | 20.0030  | 9.0 QP                        | 29.5              | -20.5          | 1.00                     | 114                        | 27.4                   | -18.4                          |
| 9   | 22.0024  | 10.3 QP                       | 29.5              | -19.2          | 1.00                     | 52                         | 28.7                   | -18.4                          |
| 10  | 23.4368  | 8.3 QP                        | 29.5              | -21.2          | 1.00                     | 329                        | 26.6                   | -18.3                          |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49 \text{MHz}$ , the measured field strength was extrapolated to distance 300 meters Distance factor@3m =  $40*\log(3/300)$  = -80 dB





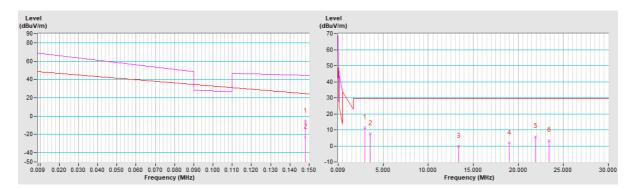


#### Standby Mode

| Channel         | TX Channel 1 + 2 |                   | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
| _               |                  | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz   |                   | Quasi-Peak (QP) |
| Test Mode       | D                |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Parallel at 3m |          |          |        |         |          |        |            |
|-----|---|----------|----------|--------|---------|----------|--------|------------|
|     | Freq.   | Emission | Limit    | Margin | Antenna | Table    | Raw    | Correction |
| No. | (MHz)   | Level    |          | •      | Height  | Angle    | Value  | Factor     |
|     | (IVITIZ)  | (dBuV/m) | (dBuV/m) | (dB)   | (m)     | (Degree) | (dBuV) | (dB/m)     |
| 1   | *0.1479   | -5.5 PK  | 44.2     | -49.7  | 1.00    | 258      | 55.1   | -60.6      |
| 2   | *0.1479   | -22.9 AV | 24.2     | -47.1  | 1.00    | 258      | 37.7   | -60.6      |
| 3   | 2.9646  | 11.4 QP  | 29.5     | -18.1  | 1.00    | 300      | 32.1   | -20.7      |
| 4   | 3.5731  | 7.5 QP   | 29.5     | -22.0  | 1.00    | 284      | 28.0   | -20.5      |
| 5   | 13.3528   | -0.1 QP  | 29.5     | -29.6  | 1.00    | 104      | 18.6   | -18.7      |
| 6   | 19.0033   | 2.0 QP   | 29.5     | -27.5  | 1.00    | 5        | 20.4   | -18.4      |
| 7   | 21.9155   | 5.8 QP   | 29.5     | -23.7  | 1.00    | 64       | 24.2   | -18.4      |
| 8   | 23.4368   | 3.4 QP   | 29.5     | -26.1  | 1.00    | 210      | 21.7   | -18.3      |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB
  - For  $0.49 \sim 30 \text{MHz}$ , the measured field strength was extrapolated to distance 30 meters Distance factor@3m =  $40 \cdot \log(3/30) = -40 \cdot \text{dB}$

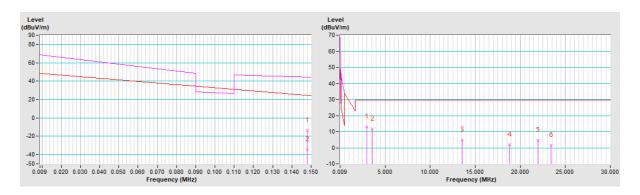




| Channel         | TX Channel 1 + 2 |                   | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
| _               |                  | Detector Function | Peak (PK)       |
| Frequency Range | 9 kHz ~ 30 MHz   |                   | Quasi-Peak (QP) |
| Test Mode       | D                |                   |                 |

|     | Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m |                   |          |        |                   |                |              |                      |  |
|-----|--|-------------------|----------|--------|-------------------|----------------|--------------|----------------------|--|
| No. | Freq.  | Emission<br>Level | Limit    | Margin | Antenna<br>Height | Table<br>Angle | Raw<br>Value | Correction<br>Factor |  |
|     | (MHz)  | (dBuV/m)          | (dBuV/m) | (dB)   | (m)               | (Degree)       | (dBuV)       | (dB/m)               |  |
| 1   | *0.1479  | -13.9 PK          | 44.2     | -58.1  | 1.00              | 315            | 46.7         | -60.6                |  |
| 2   | *0.1479  | -34.5 AV          | 24.2     | -58.7  | 1.00              | 315            | 26.1         | -60.6                |  |
| 3   | 2.9646   | 13.0 QP           | 29.5     | -16.5  | 1.00              | 85             | 33.7         | -20.7                |  |
| 4   | 3.5731   | 11.7 QP           | 29.5     | -17.8  | 1.00              | 350            | 32.2         | -20.5                |  |
| 5   | 13.5701  | 4.9 QP            | 29.5     | -24.6  | 1.00              | 5              | 23.6         | -18.7                |  |
| 6   | 18.7860  | 1.8 QP            | 29.5     | -27.7  | 1.00              | 212            | 20.2         | -18.4                |  |
| 7   | 21.9589  | 4.5 QP            | 29.5     | -25.0  | 1.00              | 107            | 22.9         | -18.4                |  |
| 8   | 23.4368  | 1.5 QP            | 29.5     | -28.0  | 1.00              | 352            | 19.8         | -18.3                |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB

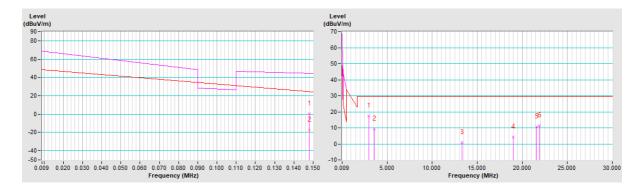




| Channel         | TX Channel 1 + 2 | Detector Function | Average (AV)    |
|-----------------|------------------|-------------------|-----------------|
| Frequency Range | 9 kHz ~ 30 MHz   | Detector Function | Quasi-Peak (QP) |
| Test Mode       | D                |                   |                 |

|     |         | Antenna Po | larity & Test I | Distance: Loc | p antenna G | round-Paralle | l at 3m |            |
|-----|---------|------------|-----------------|---------------|-------------|---------------|---------|------------|
|     | Freq.   | Emission   | Limit           | Margin        | Antenna     | Table         | Raw     | Correction |
| No. | •       | Level      |                 | _             | Height      | Angle         | Value   | Factor     |
|     | (MHz)   | (dBuV/m)   | (ubuv/iii)      | (dBuV/m) (dB) |             | (Degree)      | (dBuV)  | (dB/m)     |
| 1   | *0.1479 | 0.5 PK     | 44.2            | -43.7         | 1.00        | 143           | 61.1    | -60.6      |
| 2   | *0.1479 | -17.1 AV   | 24.2            | -41.3         | 1.00        | 143           | 43.5    | -60.6      |
| 3   | 2.9646  | 17.4 QP    | 29.5            | -12.1         | 1.00        | 61            | 38.1    | -20.7      |
| 4   | 3.5731  | 9.2 QP     | 29.5            | -20.3         | 1.00        | 200           | 29.7    | -20.5      |
| 5   | 13.3094 | 0.8 QP     | 29.5            | -28.7         | 1.00        | 173           | 19.5    | -18.7      |
| 6   | 19.0033 | 4.2 QP     | 29.5            | -25.3         | 1.00        | 58            | 22.6    | -18.4      |
| 7   | 21.5677 | 10.8 QP    | 29.5            | -18.7         | 1.00        | 167           | 29.2    | -18.4      |
| 8   | 21.9155 | 11.4 QP    | 29.5            | -18.1         | 1.00        | 250           | 29.8    | -18.4      |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + Distance Factor
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value
- 5. " \* ": Fundamental frequency.
- 6. Loop antenna was used for all radiated emission below 30MHz.
- 7.  $0.009 \sim 0.49$ MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40\*log(3/300) = -80dB





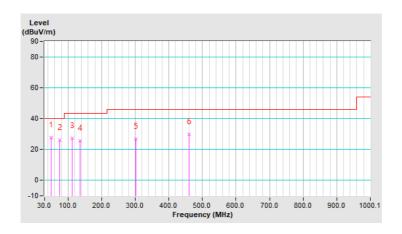
#### Below 1GHz Data:

## **Charging Mode**

| Channel         | TX Channel 1 | Datastas Francisco | Ougai Baak (OB) |  |
|-----------------|--------------|--------------------|-----------------|--|
| Frequency Range | 30MHz ~ 1GHz | Detector Function  | Quasi-Peak (QP) |  |
| Test Mode       | A            |                    |                 |  |

|     | Antenna Polarity & Test Distance: Horizontal At 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)                                     | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | 49.68  | 27.6 QP                       | 40.0              | -12.4          | 2.00 H                   | 292                        | 36.7                   | -9.1                           |
| 2   | 74.99  | 26.1 QP                       | 40.0              | -13.9          | 1.50 H                   | 238                        | 38.1                   | -12.0                          |
| 3   | 111.54   | 27.1 QP                       | 43.5              | -16.4          | 1.50 H                   | 15                         | 38.9                   | -11.8                          |
| 4   | 135.45   | 25.6 QP                       | 43.5              | -17.9          | 2.00 H                   | 41                         | 35.0                   | -9.4                           |
| 5   | 302.75   | 27.0 QP                       | 46.0              | -19.0          | 1.01 H                   | 93                         | 33.5                   | -6.5                           |
| 6   | 460.22   | 29.7 QP                       | 46.0              | -16.3          | 2.00 H                   | 117                        | 32.7                   | -3.0                           |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

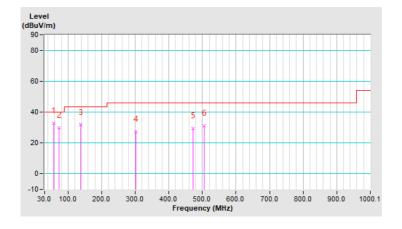




| Channel         | TX Channel 1 | Detector Function | Overi Book (OD) |
|-----------------|--------------|-------------------|-----------------|
| Frequency Range | 30MHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |
| Test Mode       | А            |                   |                 |

|     | Antenna Polarity & Test Distance: Vertical At 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)                                   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | 56.71  | 32.8 QP                       | 40.0              | -7.2           | 2.00 V                   | 110                        | 42.1                   | -9.3                           |
| 2   | 72.18  | 29.7 QP                       | 40.0              | -10.3          | 2.00 V                   | 5                          | 41.2                   | -11.5                          |
| 3   | 138.26   | 31.7 QP                       | 43.5              | -11.8          | 1.49 V                   | 26                         | 40.8                   | -9.1                           |
| 4   | 301.35   | 27.2 QP                       | 46.0              | -18.8          | 1.49 V                   | 150                        | 33.8                   | -6.6                           |
| 5   | 472.87   | 29.6 QP                       | 46.0              | -16.4          | 1.00 V                   | 64                         | 32.3                   | -2.7                           |
| 6   | 505.21   | 31.0 QP                       | 46.0              | -15.0          | 1.00 V                   | 101                        | 33.2                   | -2.2                           |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

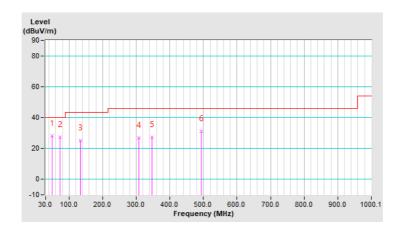




| Channel         | TX Channel 2 | Detector Function | Ouesi Beek (OB) |
|-----------------|--------------|-------------------|-----------------|
| Frequency Range | 30MHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |
| Test Mode       | В            |                   |                 |

|     | Antenna Polarity & Test Distance: Horizontal At 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)                                     | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | 49.68  | 28.2 QP                       | 40.0              | -11.8          | 2.00 H                   | 271                        | 37.3                   | -9.1                           |
| 2   | 72.18  | 27.5 QP                       | 40.0              | -12.5          | 1.49 H                   | 262                        | 39.0                   | -11.5                          |
| 3   | 134.04   | 25.1 QP                       | 43.5              | -18.4          | 1.49 H                   | 92                         | 34.6                   | -9.5                           |
| 4   | 306.97   | 26.9 QP                       | 46.0              | -19.1          | 1.00 H                   | 90                         | 33.3                   | -6.4                           |
| 5   | 346.34   | 27.3 QP                       | 46.0              | -18.7          | 1.00 H                   | 288                        | 33.0                   | -5.7                           |
| 6   | 493.96   | 30.9 QP                       | 46.0              | -15.1          | 1.00 H                   | 11                         | 33.4                   | -2.5                           |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

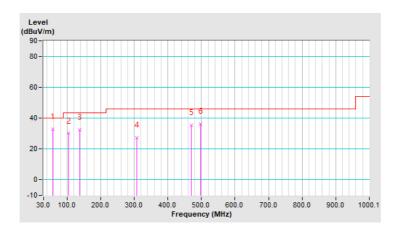




| Channel         | TX Channel 2 | Detector Function | Overi Book (OD) |
|-----------------|--------------|-------------------|-----------------|
| Frequency Range | 30MHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |
| Test Mode       | В            |                   |                 |

|     | Antenna Polarity & Test Distance: Vertical At 3m |                               |                   |                |                          |                            |                        |                                |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No. | Freq.<br>(MHz)                                   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1   | 56.71  | 32.7 QP                       | 40.0              | -7.3           | 1.00 V                   | 16                         | 42.0                   | -9.3                           |
| 2   | 104.51   | 30.0 QP                       | 43.5              | -13.5          | 1.00 V                   | 16                         | 42.5                   | -12.5                          |
| 3   | 138.26   | 32.5 QP                       | 43.5              | -11.0          | 1.00 V                   | 48                         | 41.6                   | -9.1                           |
| 4   | 308.38   | 27.2 QP                       | 46.0              | -18.8          | 1.00 V                   | 159                        | 33.6                   | -6.4                           |
| 5   | 470.06   | 35.5 QP                       | 46.0              | -10.5          | 1.00 V                   | 77                         | 38.3                   | -2.8                           |
| 6   | 496.77   | 36.2 QP                       | 46.0              | -9.8           | 1.00 V                   | 77                         | 38.5                   | -2.3                           |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

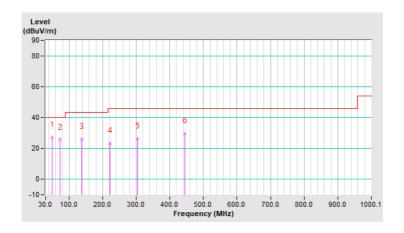




| Channel         | TX Channel 1 + 2 | Detector Function | Ougai Back (OD) |  |
|-----------------|------------------|-------------------|-----------------|--|
| Frequency Range | 30MHz ~ 1GHz     | Detector Function | Quasi-Peak (QP) |  |
| Test Mode       | С                |                   |                 |  |

|     | Antenna Polarity & Test Distance: Horizontal At 3m |                               |                   |                |                          |                            |                        |                                |  |  |  |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|--|--|
| No. | Freq.<br>(MHz)                                     | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |  |  |  |
| 1   | 49.68  | 27.3 QP                       | 40.0              | -12.7          | 2.00 H                   | 331                        | 36.4                   | -9.1                           |  |  |  |
| 2   | 72.18  | 25.8 QP                       | 40.0              | -14.2          | 1.50 H                   | 251                        | 37.3                   | -11.5                          |  |  |  |
| 3   | 138.26   | 25.9 QP                       | 43.5              | -17.6          | 1.50 H                   | 226                        | 35.0                   | -9.1                           |  |  |  |
| 4   | 221.21   | 23.4 QP                       | 46.0              | -22.6          | 1.50 H                   | 244                        | 33.9                   | -10.5                          |  |  |  |
| 5   | 304.16   | 26.6 QP                       | 46.0              | -19.4          | 1.00 H                   | 88                         | 33.1                   | -6.5                           |  |  |  |
| 6   | 444.75   | 29.9 QP                       | 46.0              | -16.1          | 2.00 H                   | 123                        | 33.3                   | -3.4                           |  |  |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

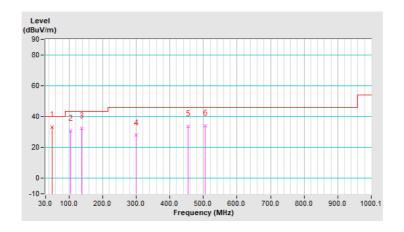




| Channel         | TX Channel 1 + 2 | Detector Function | Ougai Back (OD) |  |
|-----------------|------------------|-------------------|-----------------|--|
| Frequency Range | 30MHz ~ 1GHz     | Detector Function | Quasi-Peak (QP) |  |
| Test Mode       | С                |                   |                 |  |

|     | Antenna Polarity & Test Distance: Vertical At 3m |                               |                   |                |                          |                            |                        |                                |  |  |  |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|--|--|
| No. | Freq.<br>(MHz)                                   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |  |  |  |
| 1   | 50.42  | 33.3 QP                       | 40.0              | -6.7           | 1.00 V                   | 1                          | 42.4                   | -9.1                           |  |  |  |
| 2   | 104.51   | 30.6 QP                       | 43.5              | -12.9          | 1.01 V                   | 0                          | 43.1                   | -12.5                          |  |  |  |
| 3   | 138.26   | 32.5 QP                       | 43.5              | -11.0          | 1.01 V                   | 0                          | 41.6                   | -9.1                           |  |  |  |
| 4   | 299.94   | 27.9 QP                       | 46.0              | -18.1          | 1.51 V                   | 7                          | 34.5                   | -6.6                           |  |  |  |
| 5   | 454.59   | 33.7 QP                       | 46.0              | -12.3          | 1.01 V                   | 0                          | 36.8                   | -3.1                           |  |  |  |
| 6   | 505.21   | 34.2 QP                       | 46.0              | -11.8          | 1.01 V                   | 0                          | 36.4                   | -2.2                           |  |  |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value



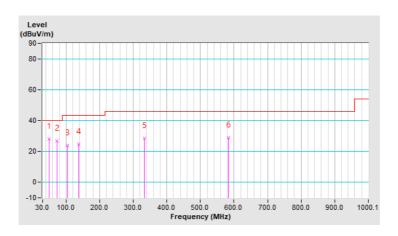


## Standby Mode

| Channel         | TX Channel 1 + 2 | Detector Function | Ougoi Poek (OP) |  |
|-----------------|------------------|-------------------|-----------------|--|
| Frequency Range | 30MHz ~ 1GHz     | Detector Function | Quasi-Peak (QP) |  |
| Test Mode       | D                |                   |                 |  |

|     | Antenna Polarity & Test Distance: Horizontal At 3m |                               |                   |                |                          |                            |                        |                                |  |  |  |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|--|--|
| No. | Freq.<br>(MHz)                                     | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |  |  |  |
| 1   | 49.68  | 28.3 QP                       | 40.0              | -11.7          | 2.00 H                   | 224                        | 37.4                   | -9.1                           |  |  |  |
| 2   | 73.58  | 26.7 QP                       | 40.0              | -13.3          | 1.51 H                   | 117                        | 38.5                   | -11.8                          |  |  |  |
| 3   | 104.51   | 24.1 QP                       | 43.5              | -19.4          | 2.00 H                   | 259                        | 36.6                   | -12.5                          |  |  |  |
| 4   | 138.26   | 24.7 QP                       | 43.5              | -18.8          | 1.51 H                   | 223                        | 33.8                   | -9.1                           |  |  |  |
| 5   | 333.68   | 28.4 QP                       | 46.0              | -17.6          | 1.01 H                   | 208                        | 34.1                   | -5.7                           |  |  |  |
| 6   | 583.94   | 28.9 QP                       | 46.0              | -17.1          | 1.01 H                   | 3                          | 29.2                   | -0.3                           |  |  |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value

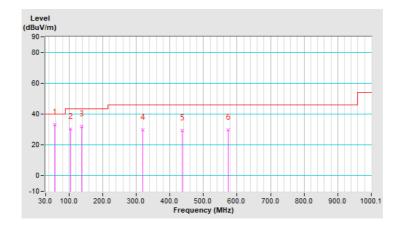




| Channel         | TX Channel 1 + 2 | Detector Function | Ouesi Beek (OD) |  |
|-----------------|------------------|-------------------|-----------------|--|
| Frequency Range | 30MHz ~ 1GHz     | Detector Function | Quasi-Peak (QP) |  |
| Test Mode       | D                |                   |                 |  |

|     | Antenna Polarity & Test Distance: Vertical At 3m |                               |                   |                |                          |                            |                        |                                |  |  |  |
|-----|--|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|--|--|--|
| No. | Freq.<br>(MHz)                                   | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |  |  |  |
| 1   | 56.71  | 33.4 QP                       | 40.0              | -6.6           | 1.00 V                   | 16                         | 42.7                   | -9.3                           |  |  |  |
| 2   | 104.51   | 30.1 QP                       | 43.5              | -13.4          | 1.00 V                   | 16                         | 42.6                   | -12.5                          |  |  |  |
| 3   | 138.26   | 32.1 QP                       | 43.5              | -11.4          | 1.00 V                   | 16                         | 41.2                   | -9.1                           |  |  |  |
| 4   | 319.62   | 29.9 QP                       | 46.0              | -16.1          | 1.00 V                   | 175                        | 36.0                   | -6.1                           |  |  |  |
| 5   | 436.32   | 29.5 QP                       | 46.0              | -16.5          | 1.00 V                   | 223                        | 33.0                   | -3.5                           |  |  |  |
| 6   | 574.10   | 29.9 QP                       | 46.0              | -16.1          | 1.00 V                   | 288                        | 30.6                   | -0.7                           |  |  |  |

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value





## 4.2 Conducted Emission Measurement

## 4.2.1 Limits of Conducted Emission Measurement

| Fraguency (MHz) | Conducted Limit (dBuV) |         |  |  |  |
|-----------------|------------------------|---------|--|--|--|
| Frequency (MHz) | Quasi-peak             | Average |  |  |  |
| 0.15 - 0.5      | 66 - 56                | 56 - 46 |  |  |  |
| 0.50 - 5.0      | 56                     | 46      |  |  |  |
| 5.0 - 30.0      | 60                     | 50      |  |  |  |

Note: 1. The lower limit shall apply at the transition frequencies.

#### 4.2.2 Test Instruments

| Description & Manufacturer               | Model No.                | Serial No.     | Cal. Date     | Cal. Due      |
|--|--------------------------|----------------|---------------|---------------|
| Test Receiver ROHDE & SCHWARZ            | ESR3                     | 102412         | Feb. 17, 2020 | Feb. 16, 2021 |
| RF signal cable (with 10dB PAD)<br>Woken | 5D-FB                    | Cable-cond2-01 | Sep. 04, 2020 | Sep. 03, 2021 |
| LISN<br>ROHDE & SCHWARZ<br>(EUT)         | ESH2-Z5                  | 100100         | Jan. 20, 2020 | Jan. 19, 2021 |
| LISN<br>ROHDE & SCHWARZ<br>(Peripheral)  | ESH3-Z5                  | 100312         | Aug. 18, 2020 | Aug. 17, 2021 |
| Software<br>ADT                          | BV ADT_Cond_<br>V7.3.7.4 | NA             | NA            | NA            |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

- 2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
- 3. The VCCI Site Registration No. is C-12047.

<sup>2.</sup> The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.



#### 4.2.3 Test Procedures

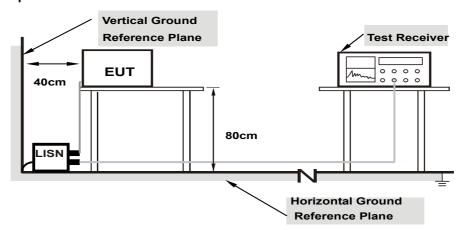
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit 20dB) were not recorded.

**NOTE:** The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

## 4.2.6 EUT Operating Conditions

Same as 4.1.6.



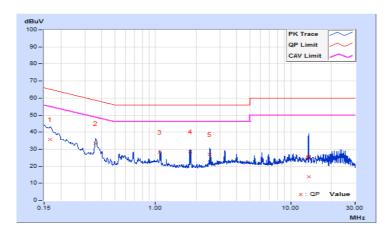
## 4.2.7 Test Results

## **Charging Mode**

| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|-------------------|-----------------------------------|
| Test Mode | A        |                   |                                   |

|    | F===     | Corr.  | Readin | g Value | Emissio | n Level | Lir   | nit   | Mai    | rgin   |
|----|----------|--------|--------|---------|---------|---------|-------|-------|--------|--------|
| No | Freq.    | Factor | [dB (  | (uV)]   | [dB     | (uV)]   | [dB   | (uV)] | (d     | B)     |
|    | [MHz]    | (dB)   | Q.P.   | AV.     | Q.P.    | AV.     | Q.P.  | AV.   | Q.P.   | AV.    |
| 1  | 0.16524  | 10.10  | 25.49  | 7.16    | 35.59   | 17.26   | 65.20 | 55.20 | -29.61 | -37.94 |
| 2  | 0.36101  | 10.18  | 23.32  | 20.65   | 33.50   | 30.83   | 58.71 | 48.71 | -25.21 | -17.88 |
| 3  | 1.07925  | 10.27  | 18.13  | 17.63   | 28.40   | 27.90   | 56.00 | 46.00 | -27.60 | -18.10 |
| 4  | 1.79925  | 10.29  | 18.49  | 18.17   | 28.78   | 28.46   | 56.00 | 46.00 | -27.22 | -17.54 |
| 5  | 2.51925  | 10.32  | 16.58  | 15.74   | 26.90   | 26.06   | 56.00 | 46.00 | -29.10 | -19.94 |
| 6  | 13.56000 | 10.52  | 3.39   | 1.23    | 13.91   | 11.75   | 60.00 | 50.00 | -46.09 | -38.25 |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.

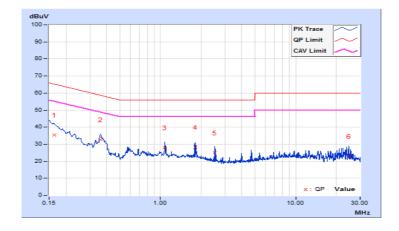




| Phase     | Neutral (N) | LI Jefector Flinction | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|-----------------------|-----------------------------------|
| Test Mode | A           |                       |                                   |

| F  |          | Corr.  | Reading Value |       | Emissio   | Emission Level |           | Limit |        | Margin |  |
|----|----------|--------|---------------|-------|-----------|----------------|-----------|-------|--------|--------|--|
| No | Freq.    | Factor | [dB (uV)]     |       | [dB (uV)] |                | [dB (uV)] |       | (dB)   |        |  |
|    | [MHz]    | (dB)   | Q.P.          | AV.   | Q.P.      | AV.            | Q.P.      | AV.   | Q.P.   | AV.    |  |
| 1  | 0.16350  | 10.07  | 25.22         | 6.98  | 35.29     | 17.05          | 65.28     | 55.28 | -29.99 | -38.23 |  |
| 2  | 0.36101  | 10.16  | 22.64         | 17.51 | 32.80     | 27.67          | 58.71     | 48.71 | -25.91 | -21.04 |  |
| 3  | 1.07925  | 10.26  | 17.58         | 16.43 | 27.84     | 26.69          | 56.00     | 46.00 | -28.16 | -19.31 |  |
| 4  | 1.79925  | 10.29  | 18.07         | 16.99 | 28.36     | 27.28          | 56.00     | 46.00 | -27.64 | -18.72 |  |
| 5  | 2.51925  | 10.33  | 14.63         | 13.88 | 24.96     | 24.21          | 56.00     | 46.00 | -31.04 | -21.79 |  |
| 6  | 24.65925 | 10.77  | 12.27         | 10.90 | 23.04     | 21.67          | 60.00     | 50.00 | -36.96 | -28.33 |  |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.





Report Format Version: 6.1.1

| Phase     | Line (L) | LI Jefector Flinction | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|-----------------------|-----------------------------------|
| Test Mode | В        |                       |                                   |

|    | Erog Corr. |        | Reading Value |      | Emissic   | Emission Level |           | Limit |        | Margin |  |
|----|------------|--------|---------------|------|-----------|----------------|-----------|-------|--------|--------|--|
| No | Freq.      | Factor | [dB (uV)]     |      | [dB (uV)] |                | [dB (uV)] |       | (dB)   |        |  |
|    | [MHz]      | (dB)   | Q.P.          | AV.  | Q.P.      | AV.            | Q.P.      | AV.   | Q.P.   | AV.    |  |
| 1  | 0.15900    | 10.09  | 20.47         | 2.25 | 30.56     | 12.34          | 65.52     | 55.52 | -34.96 | -43.18 |  |
| 2  | 0.37263    | 10.18  | 12.95         | 2.32 | 23.13     | 12.50          | 58.44     | 48.44 | -35.31 | -35.94 |  |
| 3  | 0.58425    | 10.21  | 9.25          | 3.89 | 19.46     | 14.10          | 56.00     | 46.00 | -36.54 | -31.90 |  |
| 4  | 0.88575    | 10.25  | 10.81         | 7.98 | 21.06     | 18.23          | 56.00     | 46.00 | -34.94 | -27.77 |  |
| 5  | 1.47470    | 10.28  | 7.56          | 4.73 | 17.84     | 15.01          | 56.00     | 46.00 | -38.16 | -30.99 |  |
| 6  | 3.44400    | 10.36  | 4.75          | 1.57 | 15.11     | 11.93          | 56.00     | 46.00 | -40.89 | -34.07 |  |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.

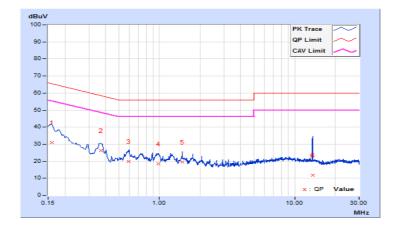




| Phase     | Neutral (N) | LI JETECTOR FUNCTION | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|----------------------|-----------------------------------|
| Test Mode | В           |                      |                                   |

|    | Erog Corr. |        | Reading Value |       | Emissio   | Emission Level |           | Limit |        | Margin |  |
|----|------------|--------|---------------|-------|-----------|----------------|-----------|-------|--------|--------|--|
| No | Freq.      | Factor | [dB (         | (uV)] | [dB (uV)] |                | [dB (uV)] |       | (dB)   |        |  |
|    | [MHz]      | (dB)   | Q.P.          | AV.   | Q.P.      | AV.            | Q.P.      | AV.   | Q.P.   | AV.    |  |
| 1  | 0.15900    | 10.06  | 20.87         | 2.38  | 30.93     | 12.44          | 65.52     | 55.52 | -34.59 | -43.08 |  |
| 2  | 0.36969    | 10.17  | 16.19         | 5.16  | 26.36     | 15.33          | 58.51     | 48.51 | -32.15 | -33.18 |  |
| 3  | 0.59100    | 10.21  | 9.50          | 4.73  | 19.71     | 14.94          | 56.00     | 46.00 | -36.29 | -31.06 |  |
| 4  | 0.98700    | 10.26  | 8.29          | 1.39  | 18.55     | 11.65          | 56.00     | 46.00 | -37.45 | -34.35 |  |
| 5  | 1.47470    | 10.28  | 9.09          | 4.90  | 19.37     | 15.18          | 56.00     | 46.00 | -36.63 | -30.82 |  |
| 6  | 13.56000   | 10.68  | 1.16          | 1.02  | 11.84     | 11.70          | 60.00     | 50.00 | -48.16 | -38.30 |  |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.

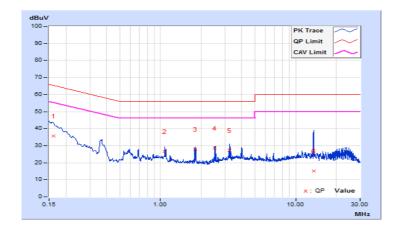




| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|-------------------|-----------------------------------|
| Test Mode | С        |                   |                                   |

|    | Erog Corr. |        | Reading Value |       | Emissio   | Emission Level |           | Limit |        | Margin |  |
|----|------------|--------|---------------|-------|-----------|----------------|-----------|-------|--------|--------|--|
| No | Freq.      | Factor | [dB (uV)]     |       | [dB (uV)] |                | [dB (uV)] |       | (dB)   |        |  |
|    | [MHz]      | (dB)   | Q.P.          | AV.   | Q.P.      | AV.            | Q.P.      | AV.   | Q.P.   | AV.    |  |
| 1  | 0.16125    | 10.10  | 25.51         | 6.34  | 35.61     | 16.44          | 65.40     | 55.40 | -29.79 | -38.96 |  |
| 2  | 1.07925    | 10.27  | 16.22         | 15.28 | 26.49     | 25.55          | 56.00     | 46.00 | -29.51 | -20.45 |  |
| 3  | 1.79925    | 10.29  | 17.54         | 17.04 | 27.83     | 27.33          | 56.00     | 46.00 | -28.17 | -18.67 |  |
| 4  | 2.51925    | 10.32  | 18.18         | 17.67 | 28.50     | 27.99          | 56.00     | 46.00 | -27.50 | -18.01 |  |
| 5  | 3.24150    | 10.35  | 16.78         | 15.19 | 27.13     | 25.54          | 56.00     | 46.00 | -28.87 | -20.46 |  |
| 6  | 13.56225   | 10.52  | 4.59          | 1.21  | 15.11     | 11.73          | 60.00     | 50.00 | -44.89 | -38.27 |  |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.

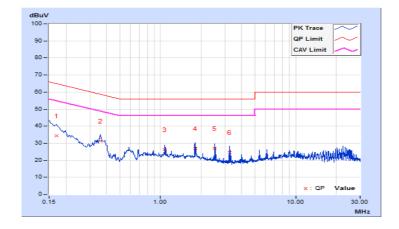




| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|-------------------|-----------------------------------|
| Test Mode | С           |                   |                                   |

|    | F== =   | Corr.  | Reading Value |           | Emission Level |           | Limit |           | Margin |        |  |
|----|---------|--------|---------------|-----------|----------------|-----------|-------|-----------|--------|--------|--|
| No | Freq.   | Factor | [dB (         | [dB (uV)] |                | [dB (uV)] |       | [dB (uV)] |        | (dB)   |  |
|    | [MHz]   | (dB)   | Q.P.          | AV.       | Q.P.           | AV.       | Q.P.  | AV.       | Q.P.   | AV.    |  |
| 1  | 0.16966 | 10.07  | 24.24         | 7.92      | 34.31          | 17.99     | 64.98 | 54.98     | -30.67 | -36.99 |  |
| 2  | 0.35911 | 10.16  | 21.07         | 15.76     | 31.23          | 25.92     | 58.75 | 48.75     | -27.52 | -22.83 |  |
| 3  | 1.07925 | 10.26  | 15.96         | 14.47     | 26.22          | 24.73     | 56.00 | 46.00     | -29.78 | -21.27 |  |
| 4  | 1.80150 | 10.29  | 16.61         | 15.72     | 26.90          | 26.01     | 56.00 | 46.00     | -29.10 | -19.99 |  |
| 5  | 2.51925 | 10.33  | 16.77         | 16.36     | 27.10          | 26.69     | 56.00 | 46.00     | -28.90 | -19.31 |  |
| 6  | 3.23925 | 10.36  | 14.29         | 13.74     | 24.65          | 24.10     | 56.00 | 46.00     | -31.35 | -21.90 |  |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.





## Standby Mode

| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|----------|-------------------|-----------------------------------|
| Test Mode | D        |                   |                                   |

|    | Erog Corr. |        | Reading Value |      | Emissic   | Emission Level |           | Limit |        | rgin   |
|----|------------|--------|---------------|------|-----------|----------------|-----------|-------|--------|--------|
| No | Freq.      | Factor | [dB (uV)]     |      | [dB (uV)] |                | [dB (uV)] |       | (dB)   |        |
|    | [MHz]      | (dB)   | Q.P.          | AV.  | Q.P.      | AV.            | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.15225    | 10.09  | 23.03         | 6.31 | 33.12     | 16.40          | 65.88     | 55.88 | -32.76 | -39.48 |
| 2  | 0.17374    | 10.11  | 19.73         | 1.05 | 29.84     | 11.16          | 64.78     | 54.78 | -34.94 | -43.62 |
| 3  | 0.25125    | 10.15  | 7.92          | 2.33 | 18.07     | 12.48          | 61.72     | 51.72 | -43.65 | -39.24 |
| 4  | 0.37050    | 10.18  | 9.95          | 1.21 | 20.13     | 11.39          | 58.49     | 48.49 | -38.36 | -37.10 |
| 5  | 0.57305    | 10.21  | 9.98          | 3.77 | 20.19     | 13.98          | 56.00     | 46.00 | -35.81 | -32.02 |
| 6  | 3.21450    | 10.35  | 3.34          | 1.77 | 13.69     | 12.12          | 56.00     | 46.00 | -42.31 | -33.88 |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.

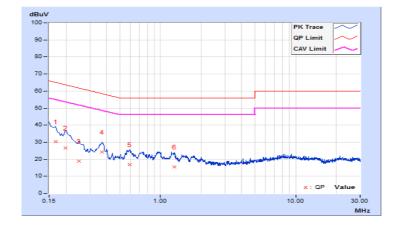




| Phase     | Neutral (N) | LI Jefector Flinction | Quasi-Peak (QP) /<br>Average (AV) |
|-----------|-------------|-----------------------|-----------------------------------|
| Test Mode | D           |                       |                                   |

| No | Freq.   | Corr.<br>Factor | Reading Value |      | Emission Level |       | Limit     |       | Margin |        |
|----|---------|-----------------|---------------|------|----------------|-------|-----------|-------|--------|--------|
|    |         |                 | [dB (uV)]     |      | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    | [MHz]   | (dB)            | Q.P.          | AV.  | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.16800 | 10.07           | 20.09         | 4.33 | 30.16          | 14.40 | 65.06     | 55.06 | -34.90 | -40.66 |
| 2  | 0.19826 | 10.10           | 16.47         | 2.54 | 26.57          | 12.64 | 63.68     | 53.68 | -37.11 | -41.04 |
| 3  | 0.24879 | 10.12           | 8.84          | 1.33 | 18.96          | 11.45 | 61.80     | 51.80 | -42.84 | -40.35 |
| 4  | 0.36872 | 10.17           | 14.07         | 2.43 | 24.24          | 12.60 | 58.53     | 48.53 | -34.29 | -35.93 |
| 5  | 0.58838 | 10.21           | 6.75          | 2.17 | 16.96          | 12.38 | 56.00     | 46.00 | -39.04 | -33.62 |
| 6  | 1.27500 | 10.27           | 5.25          | 1.97 | 15.52          | 12.24 | 56.00     | 46.00 | -40.48 | -33.76 |

- 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2. The emission levels of other frequencies were very low against the limit.
- 3. Margin value = Emission level Limit value
- 4. Correction factor = Insertion loss + Cable loss
- 5. Emission Level = Correction Factor + Reading Value.





| 5 Pictures of Test Arrangements                       |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|
| Please refer to the attached file (Test Setup Photo). |  |  |  |  |  |  |  |  |  |  |
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Report No.: RFBCBS-WTW-P20120492 Page No. 45 / 46 Report Format Version: 6.1.1



## Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: <a href="mailto:www.bureauveritas-adt.com">www.bureauveritas-adt.com</a>

The address and road map of all our labs can be found in our web site also.

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