

Report No. : FC031906-01



FCC EMI TEST REPORT

| FCC ID | : | APYHRO00287 |
|--------------|---|--|
| Equipment | : | Smart phone |
| Brand Name | : | SHARP |
| Applicant | : | SHARP CORPORATION |
| | | 2-13-1, HACHIHONMATSU-IIDA, |
| | | HIGASHI-HIROSHIMA-SHI, HIROSHIMA |
| | | PREFECTURE 739-0192, JAPAN |
| Manufacturer | : | SHARP CORPORATION |
| | | 1 Takumi-Cho, Sakai-Ku, Sakai-Shi, Osaka |
| | | 590-8522, Japan |
| Standard | : | FCC 47 CFR FCC Part 15 Subpart B Class B |

The product was received on Jun. 18, 2020 and testing was started from Jun. 29, 2020 and completed on Jul. 10, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

| His | tory o | f this test report | 3 |
|-----|------------------------------|--|--------|
| Su | nmary | <i>y</i> of Test Result | 4 |
| 1. | Gene | ral Description | 5 |
| | 1.1. 1.2. 1.3. 1.4. | Product Feature of Equipment Under Test Modification of EUT Test Location Applicable Standards | 5 6 |
| 2. | Test | Configuration of Equipment Under Test | 7 |
| | 2.1. 2.2. 2.3. 2.4. | Test Mode Connection Diagram of Test System Support Unit used in test configuration and system EUT Operation Test Setup | 8 9 |
| 3. | Test | Result1 | |
| | 3.1. 3.2. | Test of AC Conducted Emission Measurement 1 Test of Radiated Emission Measurement 1 | 2 |
| 4. | List c | of Measuring Equipment1 | 4 |
| 5. | Unce | rtainty of Evaluation1 | 5 |
| Ар | pendix | A. AC Conducted Emission Test Result | |

Appendix B. Radiated Emission Test Result

Appendix C. Setup Photographs



History of this test report

| Report No. | Version | Description | Issued Date |
|-------------|---------|-------------------------|---------------|
| FC031906-01 | 01 | Initial issue of report | Jul. 28, 2020 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|------------------|--------------------|-----------------------|-----------------------|--|
| 3.1 | 15.107 | AC Conducted Emission | Pass | Under limit 11.14 dB at 0.168 MHz |
| 3.2 | 15.109 | Radiated Emission | Pass | Under limit 0.35 dB at 480.080 MHz for Quasi-Peak |

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Dara Chiu

Report Producer: Amy Chen



1. General Description

1.1. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, FM Receiver, NFC, and GNSS

| Product Specification subjective to this standard | | | | |
|---|---|--|--|--|
| Sample 1 Main Source | | | | |
| Sample 2 | Second Source,128GB | | | |
| Sample 3 | Second source, 64GB | | | |
| Antenna Type | WWAN <ant. 1="">: PIFA / LDS Antenna <ant. 2="">: PIFA / LDS Antenna <ant. 3="">: Monopole Antenna WLAN <ant. 1="">: PIFA Antenna <ant. 2="">: PIFA Antenna Bluetooth: PIFA Antenna GPS/Glonass/BDS/Galileo: PIFA Antenna NFC: Loop Antenna FM: Using Earphone as Antenna</ant.></ant.></ant.></ant.></ant.> | | | |

1.2. Modification of EUT

No modifications are made to the EUT during all test items.



1.3. Test Location

| Test Site | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory | |
|--------------------|---|--|
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978 | |
| Test Site No. | Sporton Site No. | |
| Test Sile NO. | CO05-HY | |
| Test Site | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory | |
| Test Sile | | |
| Test Site Location | | |
| | Laboratory No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 | |

FCC designation No.: TW1093 and TW1098

1.4. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC 47 CFR FCC Part 15 Subpart B Class B
- + ANSI C63.4-2014
- **Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.



2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz

to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

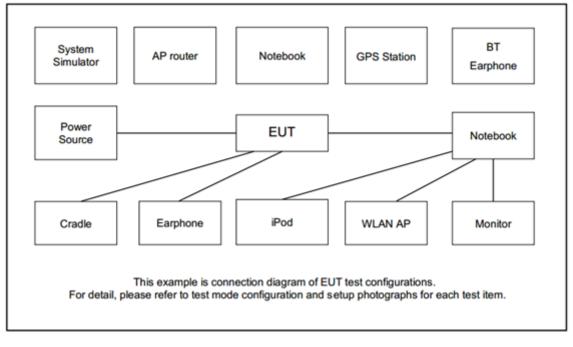
| Test Items | Function Type | | |
|--------------------------|--|--|--|
| | Mode 1: GSM 850 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + Camera (Front) + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 | | |
| | Mode 2: WCDMA Band V Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Rear) + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 | | |
| AC Conducted | Mode 3: LTE Band 5 Idle Bluetooth Idle + WLAN (2.4GHz) Idle + FM + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 | | |
| AC Conducted Emission | Mode 4: LTE Band 12 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 | | |
| | Mode 5: LTE Band 17 Idle + Bluetooth Idle + WLAN (5GHz) Idle + GPS Rx + Earphone + USB Cable (Data Link with Notebook) + SD Card for Sample 1 | | |
| | Mode 6: LTE Band 17 Idle + Bluetooth Idle + WLAN (5GHz) Idle + GPS Rx + Earphone + USB Cable (Data Link with Notebook) + SD Card for Sample 2 | | |



| Test Items | Function Type |
|-----------------------|--|
| | Mode 1: GSM 850 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + Camera (Front) + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 |
| | Mode 2: WCDMA Band V Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Rear) + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 |
| | Mode 3: LTE Band 5 Idle Bluetooth Idle + WLAN (2.4GHz) Idle + FM + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 |
| Radiated Emissions | Mode 4: LTE Band 12 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + Earphone + USB Cable (Charging from AC Adapter) + SD Card for Sample 1 |
| | Mode 5: LTE Band 17 Idle + Bluetooth Idle + WLAN (5GHz) Idle + GPS Rx + Earphone + USB Cable (Data Link with Notebook) + SD Card for Sample 1 |
| | Mode 6: LTE Band 17 Idle + Bluetooth Idle + WLAN (5GHz) Idle + GPS Rx + Earphone + USB Cable (Data Link with Notebook) + SD Card for Sample 2 |
| | Mode 7: LTE Band 17 Idle + Bluetooth Idle + WLAN (5GHz) Idle + GPS Rx + Earphone + USB Cable (Data Link with Notebook) + SD Card for Sample 3 |
| Remark: | · |

- 1. The worst case of AC is mode 5; only the test data of this mode was reported.
- 2. The worst case of RE is mode 6; only the test data of this mode was reported.
- For radiation emission after pre-scanned the cellular band between 30MHz ~ 960MHz (GSM850/WCDMA Band V/LTE Band 5/12/17); only the worst case for cellular band test data of this mode was reported.
- 4. Data Link with Notebook means data application transferred mode between EUT and Notebook.

2.2. Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

| ltem | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|--------------------|------------|-----------------------------|--------------|----------------------|--|
| 1. | System Simulator | R&S | CMU 200 | N/A | N/A | Unshielded, 1.8 m |
| 2. | System Simulator | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 3. | GPS Station | Pendulum | GSG-54 | N/A | N/A | Unshielded, 1.8 m |
| 4. | Bluetooth Earphone | Pioneer | SE-C7BTSE | N/A | N/A | N/A |
| 5. | Adapter | DVE | DSA-10PF06-05 FUS 050200 | N/A | N/A | N/A |
| 6. | WLAN AP | ASUS | RT-AC66U | MSQ-RTAC66U | N/A | Unshielded,1.8m |
| 7. | iPod | Apple | A1285 | FCC DoC | Shielded, 1.0m | N/A |
| 8. | iPod Earphone | Apple | N/A | Verification | Unshielded, 1.0 m | N/A |
| 9. | Earphone | Lenovo | SH100 | FCC DoC | N/A | N/A |
| 10. | Notebook | Dell | Latitude 3400 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 11. | Notebook | Dell | Latitude E6320 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 12. | SD Card | SanDisk | MicroSD HC | FCC DoC | N/A | N/A |
| 13. | USB Cable | JCTC | JCT024-F014 | N/A | N/A | N/A |

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized with the BCCH, and had been continuous receiving mode by setting paging reorganization of the system simulator.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test:

- 1. Data application is transferred between Laptop and EUT via USB cable.
- 2. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.
- 3. Execute "Video Player" to play MPEG4 files.
- 4. Turn on camera to capture images.
- 5. Execute "FM" to receive FM signal continuously.



3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1. Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency of emission | Conducted limit (dBuV) | | |
|-----------------------|------------------------|-----------|--|
| (MHz) | Quasi-peak | Average | |
| 0.15-0.5 | 66 to 56* | 56 to 46* | |
| 0.5-5 | 56 | 46 | |
| 5-30 | 60 | 50 | |

*Decreases with the logarithm of the frequency.

3.1.2. Measuring Instruments

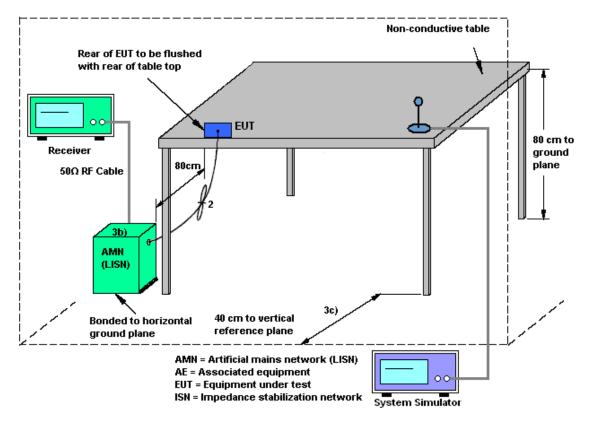
Refer a test equipment and calibration data table in this test report.

3.1.3. Test Procedure

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.



3.1.4. Test Setup



3.1.5. Test Result of AC Conducted Emission

Please refer to Appendix A.

| TEL : 886-3-327-3456 | Page Number | : 11 of 15 |
|--|----------------|-----------------|
| FAX : 886-3-328-4978 | Issued Date | : Jul. 28, 2020 |
| Report Template No.: BU5-FD15B Version 2.5 | Report Version | : 01 |



3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B>

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|--------------------|--------------------------------------|----------------------------------|
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

3.2.2. Measuring Instruments

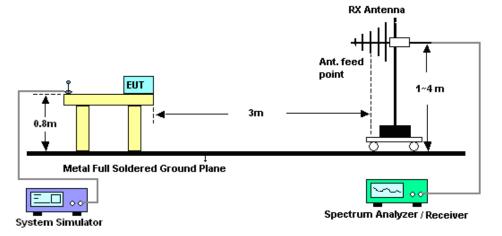
Refer a test equipment and calibration data table in this test report.

3.2.3. Test Procedures

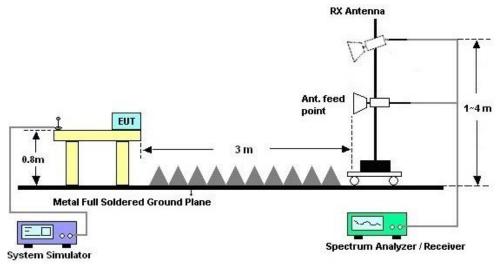
- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.



4. List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|----------------------|--------------------|-----------------------------------|--|----------------------------------|---------------------|---------------------------------|---------------|--------------------------|
| AC Power Source | ChainTek | APC-1000W | N/A | N/A | N/A | Jul. 03, 2020 | N/A | Conduction (CO05-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESR3 | 102388 | 9kHz~3.6GHz | Nov. 15, 2019 | Jul. 03, 2020 | Nov. 14, 2020 | Conduction (CO05-HY) |
| Hygrometer | Testo | 608-H1 | 34913912 | N/A | Nov. 07, 2019 | Jul. 03, 2020 | Nov. 06, 2020 | Conduction (CO05-HY) |
| LISN | Rohde & Schwarz | ENV216 | 100080 | 9kHz~30MHz | Nov. 20, 2019 | Jul. 03, 2020 | Nov. 19, 2020 | Conduction (CO05-HY) |
| LISN | Rohde & Schwarz | ENV216 | 100081 | 9kHz~30MHz | Nov. 15, 2019 | Jul. 03, 2020 | Nov. 14, 2020 | Conduction (CO05-HY) |
| Software | Rohde & Schwarz | EMC32 V10.30 | N/A | N/A | N/A | Jul. 03, 2020 | N/A | Conduction (CO05-HY) |
| LF Cable | HUBER + SUHNER | RG-214/U | LF01 | N/A | Jan. 02, 2020 | Jul. 03, 2020 | Jan. 01, 2021 | Conduction (CO05-HY) |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 100851 | N/A | Jan. 02, 2020 | Jul. 03, 2020 | Jan. 01, 2021 | Conduction (CO05-HY) |
| Amplifier | SONOMA | 310N | 187311 | 9kHz~1GHz | Oct. 22, 2019 | Jun. 29, 2020~ Jul. 10, 2020 | Oct. 21, 2020 | Radiation (03CH10-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N -06 | 35413 & 02 | 30MHz~1GHz | Feb. 11, 2020 | Jun. 29, 2020~ Jul. 10, 2020 | Feb. 10, 2021 | Radiation (03CH10-HY) |
| Horn Antenna | SCHWARZBE CK | BBHA 9120 D | 9120D-1325 | 1GHz~18GHz | Oct. 09, 2019 | Jun. 29, 2020~ Jul. 10, 2020 | Oct. 08, 2020 | Radiation (03CH10-HY) |
| Preamplifier | Jet-Power | JAP00101800- 30-10P | 160118550004 | 1GHz~18GHz | Mar. 02, 2020 | Jun. 29, 2020~ Jul. 10, 2020 | Mar. 01, 2021 | Radiation (03CH10-HY) |
| Spectrum Analyzer | Keysight | N9010A | MY54200485 | 10Hz~44GHz | Feb. 10, 2020 | Jun. 29, 2020~ Jul. 10, 2020 | Feb. 09, 2021 | Radiation (03CH10-HY) |
| Controller | EMEC | EM 1000 | N/A | Control Turn table & Ant Mast | N/A | Jun. 29, 2020~ Jul. 10, 2020 | N/A | Radiation (03CH10-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1~4m | N/A | Jun. 29, 2020~ Jul. 10, 2020 | N/A | Radiation (03CH10-HY) |
| Turn Table | EMEC | TT 2200 | N/A | 0~360 Degree | N/A | Jun. 29, 2020~ Jul. 10, 2020 | N/A | Radiation (03CH10-HY) |
| Software | Audix | E3 6.2009-8-24 | RK-001042 | N/A | N/A | Jun. 29, 2020~ Jul. 10, 2020 | N/A | Radiation (03CH10-HY) |
| EMI Test Receiver | Agilent | N9038A(MXE) | MY53290045 | 20MHz~8.4GHz | Jan. 18, 2020 | Jun. 29, 2020~ Jul. 10, 2020 | Jan. 17, 2021 | Radiation (03CH10-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 / 102 | MY11692/4PE, MY11693/4PE, MY2855/2 | 30MHz~1GHz | Nov. 07, 2019 | Jun. 29, 2020~ Jul. 10, 2020 | Nov. 06, 2020 | Radiation (03CH10-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 / 102 | MY11692/4PE, MY11693/4PE, MY2855/2 | 1GHz~18GHz | Nov. 07, 2019 | Jun. 29, 2020~ Jul. 10, 2020 | Nov. 06, 2020 | Radiation (03CH10-HY) |



5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

| Measuring Uncertainty for a Level of Confidence | 2.2 |
|---|-----|
| of 95% (U = 2Uc(y)) | 2.3 |

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

| Measuring Uncertainty for a Level of Confidence | 4 9 |
|---|-----|
| of 95% (U = 2Uc(y)) | 4.0 |

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

| Measuring Uncertainty for a Level of Confidence | 5.2 |
|---|-----|
| of 95% (U = 2Uc(y)) | 5.3 |

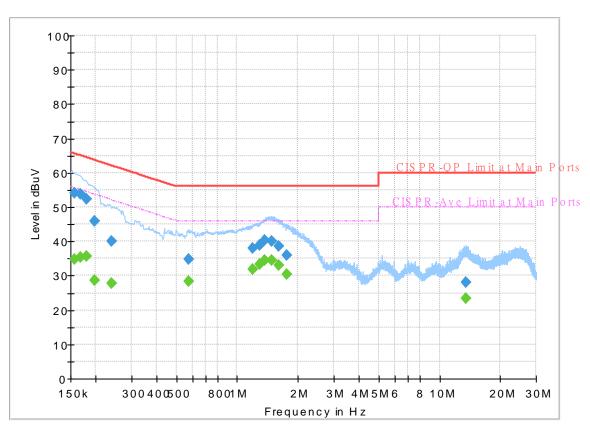


Appendix A. AC Conducted Emission Test Results

| Test Engineer : | Tom Loo | Temperature : | 23~25 ℃ |
|-----------------|---------|---------------------|----------------|
| rest Engineer . | Tom Lee | Relative Humidity : | 42~50% |

EUT Information

Report NO : Test Mode : Test Voltage : Phase : 031906-01 Mode 5 Power From System Line



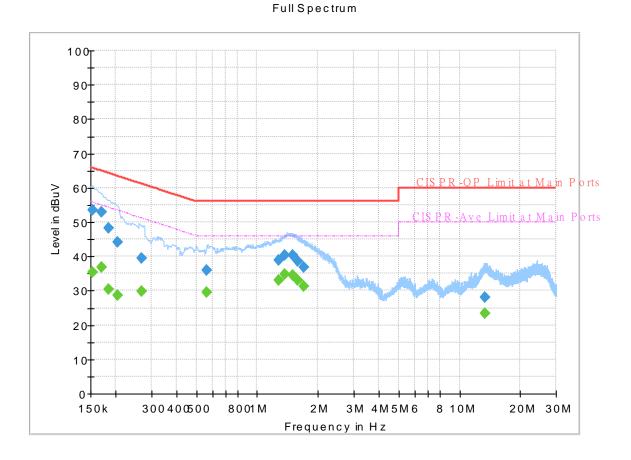
FullSpectrum

Final_Result

| Frequency | QuasiPeak | CAverage | Limit | Margin | Line | Filter | Corr. |
|-----------|-----------|----------|--------|--------|------|--------|-------|
| (MHz) | (dBuV) | (dBuV) | (dBuV) | (dB) | Line | Filler | (dB) |
| 0.156750 | (ubuv) | · / | · · · | | L1 | OFF | |
| | | 34.66 | 55.63 | 20.97 | | | 19.5 |
| 0.156750 | 54.15 | | 65.63 | 11.48 | L1 | OFF | 19.5 |
| 0.168000 | | 35.45 | 55.06 | 19.61 | L1 | OFF | 19.5 |
| 0.168000 | 53.92 | | 65.06 | 11.14 | L1 | OFF | 19.5 |
| 0.180510 | | 35.53 | 54.46 | 18.93 | L1 | OFF | 19.5 |
| 0.180510 | 52.42 | | 64.46 | 12.04 | L1 | OFF | 19.5 |
| 0.197250 | | 28.70 | 53.73 | 25.03 | L1 | OFF | 19.5 |
| 0.197250 | 45.89 | | 63.73 | 17.84 | L1 | OFF | 19.5 |
| 0.240000 | | 27.89 | 52.10 | 24.21 | L1 | OFF | 19.5 |
| 0.240000 | 39.99 | | 62.10 | 22.11 | L1 | OFF | 19.5 |
| 0.577590 | | 28.41 | 46.00 | 17.59 | L1 | OFF | 19.5 |
| 0.577590 | 34.80 | | 56.00 | 21.20 | L1 | OFF | 19.5 |
| 1.196340 | | 31.99 | 46.00 | 14.01 | L1 | OFF | 19.6 |
| 1.196340 | 38.01 | | 56.00 | 17.99 | L1 | OFF | 19.6 |
| 1.297500 | | 33.35 | 46.00 | 12.65 | L1 | OFF | 19.6 |
| 1.297500 | 38.99 | | 56.00 | 17.01 | L1 | OFF | 19.6 |
| 1.360770 | | 34.52 | 46.00 | 11.48 | L1 | OFF | 19.6 |
| 1.360770 | 40.22 | | 56.00 | 15.78 | L1 | OFF | 19.6 |
| 1.482000 | | 34.55 | 46.00 | 11.45 | L1 | OFF | 19.6 |
| 1.482000 | 40.13 | | 56.00 | 15.87 | L1 | OFF | 19.6 |
| 1.596750 | | 32.91 | 46.00 | 13.09 | L1 | OFF | 19.6 |
| 1.596750 | 38.55 | | 56.00 | 17.45 | L1 | OFF | 19.6 |
| 1.758750 | | 30.32 | 46.00 | 15.68 | L1 | OFF | 19.6 |
| 1.758750 | 35.96 | | 56.00 | 20.04 | L1 | OFF | 19.6 |
| 13.558380 | | 23.49 | 50.00 | 26.51 | L1 | OFF | 19.8 |
| 13.558380 | 28.09 | | 60.00 | 31.91 | L1 | OFF | 19.8 |

EUT Information

Report NO : Test Mode : Test Voltage : Phase : 031906-01 Mode 5 Power From System Neutral



Final_Result

| Frequency | QuasiPeak | CAverage | Limit | Margin | Line | Filter | Corr. |
|-----------|-----------|----------|--------|--------|------|--------|-------|
| (MHz) | (dBuV) | (dBuV) | (dBuV) | (dB) | | | (dB) |
| 0.153578 | | 35.26 | 55.80 | 20.54 | Ν | OFF | 19.5 |
| 0.153578 | 53.64 | | 65.80 | 12.16 | Ν | OFF | 19.5 |
| 0.170250 | | 36.96 | 54.95 | 17.99 | Ν | OFF | 19.5 |
| 0.170250 | 52.95 | | 64.95 | 12.00 | Ν | OFF | 19.5 |
| 0.183750 | | 30.44 | 54.31 | 23.87 | Ν | OFF | 19.5 |
| 0.183750 | 48.38 | | 64.31 | 15.93 | Ν | OFF | 19.5 |
| 0.204000 | | 28.66 | 53.45 | 24.79 | Ν | OFF | 19.5 |
| 0.204000 | 44.08 | | 63.45 | 19.37 | Ν | OFF | 19.5 |
| 0.269250 | | 29.80 | 51.14 | 21.34 | Ν | OFF | 19.5 |
| 0.269250 | 39.59 | | 61.14 | 21.55 | Ν | OFF | 19.5 |
| 0.561750 | | 29.50 | 46.00 | 16.50 | Ν | OFF | 19.5 |
| 0.561750 | 35.99 | | 56.00 | 20.01 | Ν | OFF | 19.5 |
| 1.281750 | | 33.10 | 46.00 | 12.90 | Ν | OFF | 19.6 |
| 1.281750 | 38.77 | | 56.00 | 17.23 | Ν | OFF | 19.6 |
| 1.371390 | | 34.72 | 46.00 | 11.28 | Ν | OFF | 19.6 |
| 1.371390 | 40.43 | | 56.00 | 15.57 | Ν | OFF | 19.6 |
| 1.493250 | | 34.58 | 46.00 | 11.42 | Ν | OFF | 19.6 |
| 1.493250 | 40.23 | | 56.00 | 15.77 | Ν | OFF | 19.6 |
| 1.590000 | | 33.12 | 46.00 | 12.88 | Ν | OFF | 19.6 |
| 1.590000 | 38.61 | | 56.00 | 17.39 | Ν | OFF | 19.6 |
| 1.707000 | | 31.23 | 46.00 | 14.77 | Ν | OFF | 19.6 |
| 1.707000 | 36.79 | | 56.00 | 19.21 | Ν | OFF | 19.6 |
| 13.364250 | | 23.32 | 50.00 | 26.68 | Ν | OFF | 19.9 |
| 13.364250 | 28.11 | | 60.00 | 31.89 | Ν | OFF | 19.9 |



Appendix B. Radiated Emission Test Result

| Tost Engineer | | na | | | Tempe | erature | : | 21~2 | 3°C | | |
|--|---|---|---|--|--|--|--|--|--|---|---|
| Test Engineer : | Yu Wa | ng | | | Relati | ve Hun | nidity : | 61~6 | 4% | | |
| Test Distance : | 3m | | | | Polari | zation | : | Horiz | ontal | | |
| Remark : | #2 is s | ystem s | simulat | or signa | al which | can be | e ignor | ed. | | | |
| Leve | l (dBuV/m) | | | | | | | | | Date: 202 | 20-07-10 |
| 97 | | | | | | | | | | | |
| 94.0 | | | | | | | | | | | |
| 84.9 | | | | | | | | | | | |
| | | | | | | | | | | FCC CI | LASS-B |
| 72.8 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 60.6 | | | | | | | | | | | |
| | | | | | | | | | 12 | C CLASS- 13 | B (AVG) |
| 48.5 | 2 | | | 9 | - 1 | 0 | 11 | | | 1 | |
| | 5- | 8 | | Ī | | | | | | | |
| 36.4 | # 6' | | | | | | | | | | |
| | | | | | | | | | | | |
| 24.3 | | | | | | | | | | | |
| 24.J | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 12.1 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 1000. | 30 | 000. | 5000 | | 7000. | | 9000. | 110 | 000. | 13000 |
| 12.1 0 ₃₀ | 1000. | 30 | 000. | 5000 | | 7000. ncy (MHz) | | 9000. | 110 | 000. | 13000 |
| | | 30 03CH10 | | 5000 | | | | 9000. | 110 | 000. | 13000 |
| 0 <mark>30</mark> | : | 03CH10 | -HY | 5000 m HORN | Freque | ncy (MHz) | | | 110 | 000. | 13000 |
| 0 ₃₀ Site | n : | 03CH10 | -HY 455-B 3 | | Freque | ncy (MHz) | IZONT | | 110 | 000. | 13000 |
| 0 ₃₀ Site Condition | : n : : | 03CH10 FCC CLA | -HY 455-B 3 -01 | | Freque | ncy (MHz) | IZONT | | 110 | 000. | 13000 |
| 0 <mark>30</mark> Site Condition Project | : n : : | 03CH10 FCC CLA 031906- | -HY 455-B 3 -01 | | Freque | ncy (MHz) | IZONT | | 110 | 000. | 13000 |
| 0 ₃₀ Site Condition Project Power | : n : : | 03CH10 FCC CLA 031906 From Sy | -HY ASS-B3 -01 vstem 0 NB | m HORN | Freque | ncy (MHz) HF HOR | | AL | | | 13000 |
| 0 ₃₀ Site Condition Project Power | n : : : | 03CH10 FCC CLA 031906 From Sy 6 eMMC t | -HY ASS-B3 -01 vstem o NB Over | m HORN LimitA | Freque 9120D- | ncy (MHz) HF HOR Read | Cable | AL Preamp | | | |
| 0 ₃₀ Site Condition Project Power | n : : : | 03CH10 FCC CLA 031906 From Sy 6 eMMC t | -HY ASS-B3 -01 vstem o NB Over | m HORN | Freque 9120D- | ncy (MHz) HF HOR Read | Cable | AL Preamp | | | 13000 Remark |
| 0 ₃₀ Site Condition Project Power | : n : : : : : : : : | 03CH10 FCC CLA 031906 From Sy 6 eMMC t | -HY ASS-B3 -01 vstem o NB Over Limit | m HORN LimitA | Freque 9120D- | ncy (MHz) HF HOR Read | Cable | AL Preamp | | | |
| 0 ₃₀ Site Condition Project Power Mode | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Leve1 dBuV/m | -HY ASS-B 3 -01 /stem o NB Over Limit | M HORN LimitA Line dBuV/m | Freques 9120D- Antenna Factor dB/m | Read Level dBuV | Cable Loss dB | AL Preamp Factor dB | A/Pos cm | T/Pos deg | Remark |
| 0 ₃₀ Site Condition Project Power Mode | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Leve1 dBuV/m | -HY ASS-B 3 -01 /stem o NB Over Limit | m HORN LimitA Line dBuV/m 46.00 | Freques 9120D- Antenna Factor dB/m 23.71 | Read Level dBuV 51.93 | Cable Loss dB 2.40 | AL Preamp Factor dB 32.39 | A/Pos cm 100 | T/Pos deg 179 | Remark QP |
| 0 30 Site Condition Project Power Mode | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Leve1 dBuV/m 45.65 | -HY ASS-B 3 -01 /stem o NB Over Limit | m HORN LimitA Line dBuV/m 46.00 46.00 | Freques 9120D- Antenna Factor dB/m 23.71 27.91 | Read Level dBuV 51.93 48.89 | Cable Loss dB 2.40 3.00 | AL Preamp Factor dB 32.39 32.32 | A/Pos cm | T/Pos | Remark QP Peak |
| 0 30 Site Condition Project Power Mode | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 | -HY 455-B 3 -01 /stem 0 NB 0ver Limit -0.35 -8.84 | m HORN LimitA Line dBuV/m 46.00 46.00 | Freque 9120D- antenna Factor dB/m 23.71 27.91 28.02 | Read Level dBuV 51.93 48.89 38.38 | Cable Loss dB 2.40 3.00 3.04 | AL Preamp Factor dB 32.39 | A/Pos | T/Pos deg 179 | Remark QP |
| 0 30 Site Condition Project Power Mode | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.16 37.42 39.10 | -HY 455-B 3 -01 vstem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 | AL Preamp Factor dB 32.39 32.32 32.28 | A/Pos | T/Pos | QP Peak Peak |
| 0 30 Site Condition Project Power Mode 1 2 * 3 4 5 6 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.16 37.42 39.10 36.57 | HY 455-B 3 -01 vstem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 -9.43 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 | AL Preamp Factor dB 32.39 32.32 32.28 32.23 | A/Pos cm 100 | T/Pos deg 179 | QP Peak Peak Peak Peak |
| Site Condition Project Power Mode 1 2 * 3 4 5 6 7 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.16 37.42 39.10 36.57 37.40 | -HY 455-B 3 -01 vstem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 -9.43 -8.60 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 46.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 30.54 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 34.27 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 3.47 | AL Preamp Factor dB 32.39 32.32 32.28 32.23 32.00 31.56 30.88 | A/Pos cm 100 | T/Pos deg 179 | QP Peak Peak Peak Peak Peak Peak Peak Pea |
| Site Condition Project Power Mode 1 2 * 3 4 5 6 7 8 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.16 37.42 39.10 36.57 37.40 43.02 | -HY ASS-B 3 -01 vstem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 -9.43 -8.60 -30.98 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 46.00 74.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 30.54 28.49 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 34.27 66.04 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 3.47 6.53 | Preamp Factor dB 32.39 32.32 32.28 32.23 32.00 31.56 30.88 58.04 | A/Pos cm 100 | T/Pos deg 179 | QP Peak Peak Peak Peak Peak Peak Peak Pea |
| Site Condition Project Power Mode 1 2 * 3 4 5 6 7 8 2 9 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.42 39.10 36.57 37.40 43.02 44.82 | -HY ASS-B 3 -01 /stem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 -9.43 -8.60 -30.98 -29.18 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 46.00 74.00 74.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 30.54 28.49 31.20 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 34.27 66.04 63.63 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 3.47 6.53 8.48 | AL Preamp Factor dB 32.39 32.32 32.28 32.23 32.00 31.56 30.88 58.04 58.04 | A/Pos cm 100 | T/Pos deg 179 | QP Peak Peak Peak Peak Peak Peak Peak Pea |
| 0 30 Site Condition Project Power Mode 1 2 * 3 4 5 6 7 8 2 9 4 10 6 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.40 36.57 37.40 43.02 44.82 45.72 | -HY ASS-B 3 -01 vstem o NB Over Limit -0.35 -8.84 -8.58 -6.90 -9.43 -8.60 -9.43 -8.60 -30.98 -29.18 -28.28 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 46.00 74.00 74.00 74.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 30.54 28.49 31.20 33.93 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 34.27 66.04 63.63 61.36 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 3.47 6.53 8.48 9.94 | AL Preamp Factor dB 32.39 32.32 32.28 32.23 32.00 31.56 30.88 58.04 58.49 59.51 | A/Pos cm 100 | T/Pos deg 179 | Remark QP Peak Peak Peak Peak Peak Peak Peak Pea |
| Site Condition Project Power Mode 1 2 * 3 4 5 6 7 8 2 9 4 10 6 11 | n : : : : : : : : : : : : : : : : : : : | 03CH10 FCC CLA 031906- From Sy 6 eMMC † Level dBuV/m 45.65 37.16 37.42 39.10 36.57 37.40 43.02 44.82 45.72 48.51 | -HY ASS-B 3 -01 vstem 0 NB 0ver Limit -0.35 -8.84 -8.58 -6.90 -9.43 -8.60 -9.43 -8.60 -30.98 -29.18 -28.28 -25.49 | m HORN LimitA Line dBuV/m 46.00 46.00 46.00 46.00 46.00 46.00 74.00 74.00 74.00 74.00 | Freque 9120D- antenna Factor 23.71 27.91 28.02 28.06 28.33 28.88 30.54 28.49 31.20 33.93 37.22 | Read Level dBuV 51.93 48.89 38.38 38.47 39.56 35.91 34.27 66.04 63.63 61.36 59.99 | Cable Loss dB 2.40 3.00 3.04 3.12 3.21 3.34 3.47 6.53 8.48 9.94 11.48 | AL Preamp Factor dB 32.39 32.32 32.28 32.23 32.00 31.56 30.88 58.04 58.04 58.49 59.51 60.18 | A/Pos cm 100 | T/Pos deg 179 | QP Peak Peak Peak Peak Peak Peak Peak Pea |



