

FCC ID: APYHRO00251 Report No.: E1/2017/80099

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## FCC CERTIFICATION REPORT

**Test Report No.** : E1/2017/80099

**Applicant** : Sharp Corporation, IoT Communication B.U.

**Address** : 2-13-1, Hachihonmatsu-lida, Higashi-hiroshima-shi, Hiroshima

739-0192, Japan

Manufacturer : Sharp Corporation

**Address** : 1 Takumi-cho, Sakai-ku, Sakai City,Osaka 590-8522,Japan

**Equipment Under Test (EUT): Product Name** : Smart Phone

**Standards** : FCC Part 15:2017, Subpart B, Class B

FCC Registration Numbers: 916890

Date of Receipt: Aug. 10, 2017

Date of Test : Aug. 10 ~ Sep. 06, 2017

Date of Issue : Sep. 13, 2017

Test Result: **PASS** 

In the configuration tested, the EUT complied with the standards specified above.

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Tested By: Ivan Hsieh (Engineer) Date Sep. 13, 2017

Approved By Sep. 13, 2017 Date

Eddy Cheng (Asst. Supervisor)

TAF 0513

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## **Revision History**

| Report Number | Revision | Description                  | Issue Date    |
|---------------|----------|------------------------------|---------------|
| E1/2017/80099 | Rev.00   | Initial creation of document | Sep. 13, 2017 |
|               |          |                              |               |
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# 1. General Information

## 1.1 Applicant & Manufacturer Information

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Address of Applicant : 2-13-1, Hachihonmatsu-lida, Higashi-hiroshima-

shi, Hiroshima 739-0192, Japan

Manufacturer : Sharp Corporation

Address of Manufacturer: 1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-

8522, Japan

## 1.2 General Description of EUT

Product Name : Smart Phone

#### 1.3 Details of EUT

**Power Supply** : AC 100~240V, 50~60Hz

. CE worst case : Config 3 Worst case

Below / Above RE worst case : Config 2

Highest operate description : 2480 MHz

**Battery** : Model No.: UBATIA283AFN2

Supplier: SCUD(FUJIAN) Electronics Co., Ltd.

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| QD43                             | Config 1  | Config2                      | Config 3  |  |
|----------------------------------|---|------------------------------|---|--|
| Applicable standard              |   | FCC 15B                      |   |  |
| Accessories                      | EUT<br>+ AC Adaptor(AC ADAPTER<br>06)<br>+USB Cable<br>+PHF | EUT<br>+USB<br>Cable<br>+PHF | EUT<br>+ AC Adaptor(AC ADAPTER<br>06)<br>+USB Cable<br>+PHF |  |
| Main function                    | Speech  | Data Link                    | Camera  |  |
| Additional function              | BT+WiFI +NFC  |                              |   |  |
| Description                      |   |                              |   |  |
| radiated emission                | GSM 850/1900<br>WCDMA B5<br>LTE B5/B12/B17                  | Data R/W                     | MP3/ ;REC mode (Front/Back)<br>;play REC                    |  |
| conducted emission (DC<br>Power) | NA  | NA                           | NA  |  |
| conducted emission (AC<br>Power) | GSM 850/1900<br>WCDMA B5<br>LTE B5/B12/B17                  | Data R/W                     | MP3/ ;REC mode (Front/Back)<br>;play REC                    |  |

## 1.4 Operation Procedure

### Config 1

- 1. Let EUT connect to Adapter & USB Cable & Earphone and turn it on.
- 2. Executed BT & WIFI & GPS & NFC & GSM 850/1900 or WCDMA B5 or LTE B5/B12/B17 Link.
- 3. Started the test.

#### Config 2

- 1. Let EUT connect to Earphone & USB Cable and NB Link.
- 2. Executed BT & WIFI & GPS & NFC Link.
- 3. NB and mobile phone USB data transmission (Reader / Write)
- 4. Started the test.

#### Config 3

- 1. Let EUT connect to Adapter & USB Cable & Earphone and turn it on.
- 2. Turned on front / rear camera to record / play the video or play music.
- 3. Executed BT & WIFI & GPS & NFC Link.
- 4. Started the test.

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## 1.5 Description of Support Units

| PRODUCT                      | MANUFACTURER | MODEL NO.           | SERIAL NO.               |
|------------------------------|--------------|---------------------|--------------------------|
| SIM Card                     | R&S          | CMW-Z05             | 8952530076180167200      |
| BT Speaker                   | Creative     | MF8090              | YFMF8090245R00855Y       |
| Radio Communication Analyzer | R&S          | CMU200              | 102189                   |
| Radio Communication Analyzer | R&S          | CMW500              | 1201.002K50-152303-Zr    |
| AP                           | BUFFALO      | WZR-HP-G300NH2      | 44066221202559[[G]]      |
| GPS Signal Generator         | Spectracom   | GSG53 GNSS4         | 200218                   |
| Notebook                     | DELL         | Latitude E5430      | COVZYW1                  |
| Mouse                        | DELL         | MS111-T             | CN-OKW2YH-71616-345-OL7T |
| Printer                      | HP           | VCVRA-1004          | CN33K19J3F               |
| Micro SD                     | Transcend    | Micro SDHC (Class4) | N/A                      |
| Adapter                      | HOSIDEN      | AC ADAPTER 06       | N/A                      |
| Earphone                     | SONY         | MDR-EX15AP          | N/A                      |

**Support Equipment Used in Tested Cable** 

| Cable Type     | Core | Length | Shielding/Non-shielding |
|----------------|------|--------|-------------------------|
| USB cable      | N/A  | 0.95m  | Shielding               |
| Earphone cable | N/A  | 1.25m  | Non-shielding           |

#### 1.6 Modification List

No modification was made by SGS Taiwan Electronics & Communication Laboratory.

#### 1.7 Accessories Cable List

| Cable Type | Core | Length | Shielding/Non-shielding |
|------------|------|--------|-------------------------|
| N/A        | N/A  | N/A    | N/A                     |

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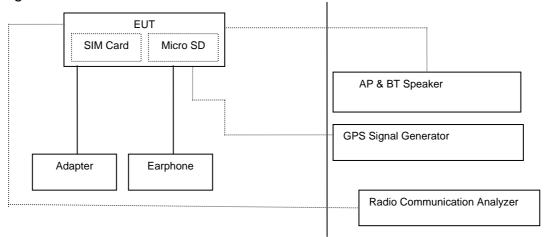
SGS

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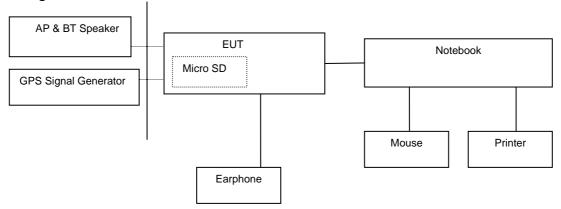
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## 1.8 Test Set-Up Configuration

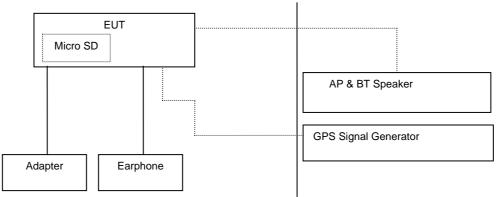
## Config 1



## Config 2



## Config 3



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#### 1.9 Measurement Procedure

Conducted Emission Testing was performed according to ANSI C63.4:2014 in a shielded room with peripherals placed on a table, 0.8m high over a metal floor. It was located more than required distance away from the shielded room wall.

Radiated Emission Testing was performed according to ANSI C63.4:2014 at the 3/10m semi-anechoic chamber. The EUT was placed on a 0.8m high table along with the peripherals. The turn table was placed 10m distance from the antenna. Cables were placed in a position to produce maximum emissions as determined by experimentation, and operation mode was selected for production of maximum emission.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities. Maximum emission levels are then reported.

## 1.10 Standards Applicable for Testing

Tests to be carried out under FCC Part 15. Subpart B/CISPR 22

| Test Standards                      | Status       |
|-------------------------------------|--------------|
| FCC Part 15, Subpart B/<br>CISPR 22 | Applicable   |
| Deviation from Standard             | No deviation |

#### 1.11 Summary of Results

| Highest Emission   |                     |      |         |         |             |  |
|--|---------------------|------|---------|---------|-------------|--|
| Standard Test Type Result Phase/Pol. Frequency(MHz) Margin(dB) |                     |      |         |         | Margin(dB)  |  |
| 500 David 45 O. harani D.                                      | Conducted Fasincian | DACC | Line    | 0.1540  | -10.54 (QP) |  |
| FCC Part 15 Subpart B<br>Class B                               | Conducted Emission  | PASS | Neutral | 0.1540  | -10.66 (QP) |  |
| Class B  | Radiated Emission   | PASS | Ver.    | 47.1100 | -5.30 (QP)  |  |

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## 2. EMISSION

#### 2.1 Test Results

|                    | Results |
|--------------------|---------|
| Conducted Emission | Pass    |
| Radiated Emission  | Pass    |

## 2.2 Frequency Range

## FCC Part 15, Subpart B:

Conducted Emission : 150 kHz - 30 MHz
Radiated Emission : See below table

Highest frequency generated or Upper frequency of measurement used in the device or on which the range (MHz)

device operates or tunes (MHz)

Below 1.705 30 1.705 - 108 1000 108 - 500 2000 500 - 1000 5000

Above 1000 5th harmonic of the highest frequency or

40 GHz, whichever is lower

## 2.3 Limits of Conducted and Radiated Emission

#### 2.3.1 Limits of Conducted Emission

#### FCC Part 15, Subpart B/CISPR 22:

| FREQUENCY  | Class A (dBuV)       |    | Class B (dBuV) |         |  |
|------------|----------------------|----|----------------|---------|--|
| (MHz)      | Quasi - peak Average |    | Quasi - peak   | Average |  |
| 0.15 - 0.5 | 79                   | 66 | 66 - 56        | 56 - 46 |  |
| 0.50 - 5.0 | 73                   | 60 | 56             | 46      |  |
| 5.0 - 30.0 | 73                   | 60 | 60             | 50      |  |

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

- (2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.
- (3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected there to, shall not exceed the level of field strengths specified above.

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#### 2.3.2 Limits of Radiated Emissions

## FCC Part 15, Subpart B Limit:

Detector Function : Quasi – Peak

| - Bototor i anotion : Quaer i car |                  |                 |  |  |  |
|-----------------------------------|------------------|-----------------|--|--|--|
| FREQUENCY                         | Class A (at 10m) | Class B (at 3m) |  |  |  |
| (MHz)                             | dBuV/m           | dBuV/m          |  |  |  |
| 30~88                             | 39               | 40              |  |  |  |
| 88~216                            | 43.5             | 43.5            |  |  |  |
| 216~960                           | 46.44            | 46              |  |  |  |
| Above 960                         | 49.54            | 54              |  |  |  |

Detector Function : Peak , Average

| FREQUENCY  | Class A (dB  | uV/m) (at 3m) | Class B (dBu | uV/m) (at 3m) |
|------------|--------------|---------------|--------------|---------------|
| (MHz)      | Peak Average |               | Peak         | Average       |
| Above 1000 | 79.3         | 59.3          | 73.9         | 53.9          |

## **CISPR 22 Limit:**

Detector Function : Quasi – Peak

| FREQUENCY | Class A (at 10m) | Class B (at 10m) |
|-----------|------------------|------------------|
| (MHz)     | dBuV/m           | dBuV/m           |
| 30-230    | 40               | 30               |
| 230-1000  | 47               | 37               |

NOTE 1 The lower limit shall apply at the transition frequency.

NOTE 2 Additional provisions may be required for cases where interference occurs.

| FREQUENCY | Class A (dB | suV/m) (at 3m) | Class B (dB | uV/m) (at 3m) |
|-----------|-------------|----------------|-------------|---------------|
| (GHz)     | Average     | Peak           | Average     | Peak          |
| 1~3       | 56          | 76             | 50          | 70            |
| 3~6       | 60          | 80             | 54          | 74            |

NOTE The lower limit applies at the transition frequency.

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## 2.4.Test of Conducted Emission

## 2.4.1 Test Equipments

| SC   | SS Conducted_Emi     | ssion HWAYA Conducted I     | Room No.A_E       | MC                  |                    |
|--|----------------------|-----------------------------|-------------------|---------------------|--------------------|
| EQUIPMENT TYPE                               | Manufacturer         | Model Number                | Serial<br>Number  | Calibration<br>Date | Calibration<br>Due |
| EMI Test Receiver                            | R&S                  | ESCI 3                      | 101311            | 2017/6/23           | 2018/6/22          |
| Coaxial Cables                               | EMC Instruments Corp | EMCRG58-BM-BM-3000          | 160812            | 2017/8/30           | 2018/8/29          |
| LISN   | SCHWARZBECK          | NSLK 8127                   | 8127-648          | 2017/6/18           | 2018/6/17          |
| Pulse Limiter                                | Narda S.T.S.         | PMM PL01                    | 1110X30602        | 2017/8/12           | 2018/8/11          |
| LISN   | FCC                  | FCC-LISN-50/250-25-2-<br>01 | 4034              | 2017/3/19           | 2018/3/18          |
| Universal Digital Radio Communication Tester | R&S                  | CMU 200                     | 122498            | 2016/11/9           | 2017/11/8          |
| Wideband Radio<br>Communication Tester       | R&S                  | CMW 500                     | 152303            | 2017/2/23           | 2018/2/22          |
| Test S/W                                     | Farad                | EZ-EMC                      | Ver. SGS-<br>03A2 | N.C.R.              | N.C.R.             |

SGS Taiwan LTD. Electronics & Communication Laboratory

No.2, Keji 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

Measurement Uncertainty of Conducted Emission

Expanded uncertainty (K=2) of conducted emission is 2.25 dB

## 2.4.2 Operating Environment

Temperature: 25 degree C Humidity: 64 %RH

Atmospheric Pressure: 992 mBar

#### 2.4.3 Measurement Level Calculation

Factor = LISN insertion loss + Cable loss + Pulse Limiter Insertion Loss

Measurement Level = Reading Level + Factor

Over (Margin) = Measurement Level – Limit

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#### 2.4.4 Measurement Data:

## Config\_1\_L

Phase:

Power:

Site : Conduction Room Limit: FCC Class B Conduction(QP)

L1

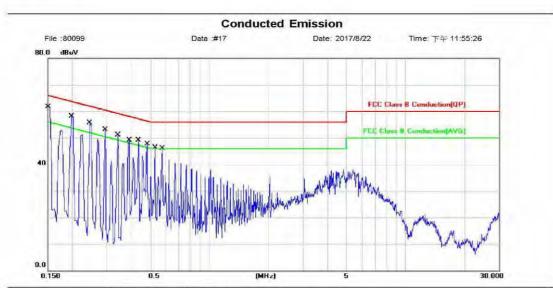
AC 120V/60Hz

25 ℃ Temperature:

Humidity:

Mode: Config 1 GSM1900

Note: Hynix



| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   | *   | 0.1500 | 54.80            | 0.34              | 55.14            | 66.00 | -10.86 | QP       |         |
| 2   |     | 0.1500 | 32.60            | 0.34              | 32.94            | 56.00 | -23.06 | AVG      |         |
| 3   |     | 0.1980 | 50.80            | 0.33              | 51,13            | 63.69 | -12.56 | QP       |         |
| 4   |     | 0.1980 | 27.50            | 0.33              | 27.83            | 53,69 | -25.86 | AVG      |         |
| 5   |     | 0.2460 | 47.60            | 0.33              | 47.93            | 61.89 | -13.96 | QP       |         |
| 6   |     | 0.2460 | 24.50            | 0.33              | 24.83            | 51,89 | -27.06 | AVG      |         |
| 7   |     | 0.2940 | 44.50            | 0.33              | 44.83            | 60.41 | -15.58 | QP       |         |
| 8   |     | 0.2940 | 19.50            | 0.33              | 19.83            | 50.41 | -30.58 | AVG      |         |
| 9   |     | 0.3420 | 43.00            | 0.34              | 43.34            | 59.15 | -15.81 | QP       |         |
| 10  |     | 0.3420 | 17.70            | 0.34              | 18.04            | 49,15 | -31.11 | AVG      |         |
| 11  |     | 0.3900 | 41.50            | 0.34              | 41.84            | 58.06 | -16.22 | QP       |         |
| 12  |     | 0.3900 | 23.40            | 0.34              | 23.74            | 48.06 | -24.32 | AVG      |         |
| 13  |     | 0.4340 | 42.00            | 0.34              | 42.34            | 57.18 | -14.84 | QP       |         |

\*:Maximum data x:Over limit !:over margin

File: 80099\Data:#17

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## Config\_1\_L2

| lo. Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 14      | 0.4340 | 27.20            | 0.34              | 27.54            | 47.18 | -19.64 | AVG      |         |
| 15      | 0.4820 | 41.20            | 0.34              | 41.54            | 56.30 | -14.76 | QP       |         |
| 16      | 0.4820 | 26.70            | 0.34              | 27.04            | 46.30 | -19.26 | AVG      |         |
| 17      | 0.5300 | 38.30            | 0.35              | 38.65            | 56.00 | -17.35 | QP       |         |
| 18      | 0.5300 | 23.80            | 0.35              | 24.15            | 46.00 | -21.85 | AVG      |         |
| 19      | 0.5780 | 35.70            | 0,35              | 36,05            | 56.00 | -19.95 | QP       |         |
| 20      | 0.5780 | 22.60            | 0.35              | 22.95            | 46.00 | -23.05 | AVG      |         |
|         |        |                  |                   |                  |       |        |          |         |

\*: Maximum data x:Over limit hover margin

File :80099\Data :#17

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## Config\_1\_N

Conduction Room Site : Limit: FCC Class B Conduction(QP)

Mode: Config 1 GSM1900

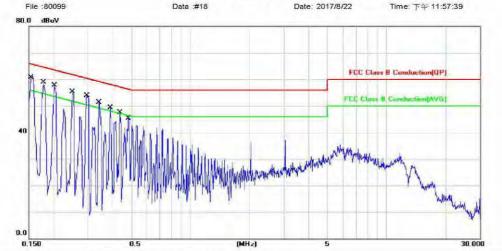
Note: Hynix

Phase: AC 120V/60Hz Power:

Temperature: 25 °C

Humidity: 64 %

Conducted Emission File: 80099 Data :#18 Date: 2017/8/22 80.0 dRuN



| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   | *   | 0.1500 | 55.00            | 0.42              | 55.42            | 66.00 | -10.58 | QP       |         |
| 2   |     | 0.1500 | 33.70            | 0.42              | 34.12            | 56.00 | -21.88 | AVG      |         |
| 3   |     | 0.1780 | 52.10            | 0.41              | 52.51            | 64.58 | -12.07 | QP       |         |
| 4   |     | 0.1780 | 30.30            | 0.41              | 30,71            | 54.58 | -23,87 | AVG      |         |
| 5   |     | 0.2020 | 50.20            | 0.41              | 50.61            | 63,53 | -12.92 | QP       |         |
| 6   |     | 0.2020 | 27.00            | 0.41              | 27,41            | 53.53 | -26.12 | AVG      |         |
| 7   |     | 0.2500 | 46.60            | 0.41              | 47.01            | 61.76 | -14.75 | QP       |         |
| 8   |     | 0.2500 | 23.50            | 0,41              | 23.91            | 51.76 | -27.85 | AVG      |         |
| 9   |     | 0.2980 | 44.40            | 0.41              | 44.81            | 60.30 | -15.49 | QP       |         |
| 10  |     | 0.2980 | 18.60            | 0.41              | 19.01            | 50.30 | -31.29 | AVG      |         |
| 11  |     | 0.3420 | 42.70            | 0.42              | 43.12            | 59.15 | -16.03 | QP       |         |
| 12  |     | 0.3420 | 16.70            | 0.42              | 17.12            | 49.15 | -32.03 | AVG      |         |
| 13  |     | 0.3900 | 40.90            | 0.42              | 41.32            | 58.06 | -16.74 | QP-      |         |

<sup>\*:</sup>Maximum data x:Over limit !:over margin

File: 80099\Data:#18

Page: 1

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FCC ID: APYHRO00251

Report No.: E1/2017/80099

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### Config\_1\_N2

| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 14  |     | 0.3900 | 24.00            | 0.42              | 24.42            | 48.06 | -23.64 | AVG      |         |
| 15  |     | 0.4380 | 40.30            | 0.42              | 40.72            | 57.10 | -16.38 | QP       |         |
| 16  |     | 0.4380 | 24.20            | 0.42              | 24.62            | 47.10 | -22.48 | AVG      |         |
| 17  | -   | 0.4860 | 40.30            | 0.42              | 40.72            | 56.24 | -15.52 | QP       |         |
| 18  |     | 0.4860 | 25.50            | 0.42              | 25.92            | 46.24 | -20.32 | AVG      |         |
|     |     |        |                  |                   |                  |       |        |          |         |

\*: Maximum data x:Over limit hover margin

File :80099\Data :#18

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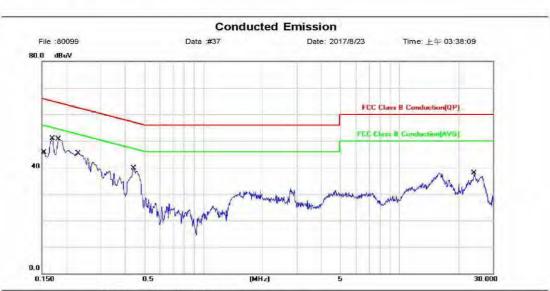


## Config\_2\_L

Temperature: 25 °C Conduction Room Phase: Site : Limit: FCC Class B Conduction(QP) From System Humidity: 64 % Power:

Mode: Config 2

Note: Hynix, AC 120V/60Hz, Internal Sotrage Write



| No. | Mk. | Freq.   | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|---------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   |     | 0.1540  | 43.30            | 0.42              | 43.72            | 65.78 | -22.06 | QP       |         |
| 2   |     | 0.1540  | 24.40            | 0.42              | 24.82            | 55.78 | -30.96 | AVG      |         |
| 3   |     | 0.1700  | 47.90            | 0.42              | 48.32            | 64.96 | -16.64 | QP       |         |
| 4   |     | 0.1700  | 34.30            | 0.42              | 34,72            | 54.96 | -20.24 | AVG      |         |
| 5   |     | 0.1820  | 38.70            | 0.41              | 39.11            | 64.39 | -25.28 | QP       |         |
| 6   |     | 0.1820  | 21.70            | 0.41              | 22.11            | 54.39 | -32.28 | AVG      |         |
| 7   |     | 0.2300  | 35.90            | 0.41              | 36.31            | 62.45 | -26.14 | QP       |         |
| 8   |     | 0.2300  | 20.60            | 0.41              | 21.01            | 52.45 | -31.44 | AVG      |         |
| 9   |     | 0.4420  | 31.30            | 0.42              | 31.72            | 57.02 | -25.30 | QP       |         |
| 10  |     | 0.4420  | 16.20            | 0.42              | 16.62            | 47.02 | -30.40 | AVG      |         |
| 11  |     | 24.0780 | 26.80            | 0.87              | 27.67            | 60.00 | -32.33 | QP       |         |
| 12  |     | 24.0780 | 20.90            | 0.87              | 21.77            | 50.00 | -28.23 | AVG      |         |
|     |     |         |                  |                   |                  |       |        |          |         |

\*:Maximum data x:Over limit

File: 80099\Data:#37 Page: 1

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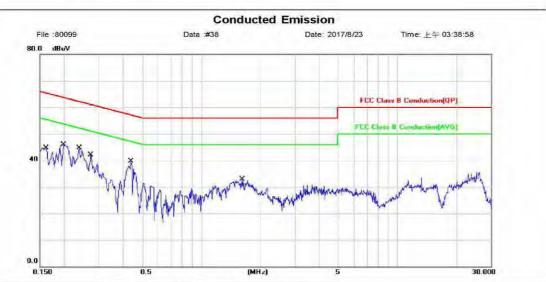
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## Config\_2\_N

Temperature: 25 °C Conduction Room Phase: Site : L1 Limit: FCC Class B Conduction(QP) From System Humidity: 64 % Power:

Mode: Config 2

Note: Hynix, AC 120V/60Hz, Internal Sotrage Write



| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   |     | 0.1620 | 42.00            | 0.34              | 42.34            | 65.36 | -23.02 | QP       |         |
| 2   |     | 0.1620 | 28.70            | 0.34              | 29.04            | 55.36 | -26.32 | AVG      |         |
| 3   |     | 0.1980 | 38.30            | 0.33              | 38.63            | 63.69 | -25.06 | QP       |         |
| 4   |     | 0.1980 | 22.00            | 0.33              | 22.33            | 53,69 | -31.36 | AVG      |         |
| 5   |     | 0.2380 | 38.60            | 0.33              | 38.93            | 62.17 | -23.24 | QP       |         |
| 6   |     | 0.2380 | 24.30            | 0.33              | 24.63            | 52.17 | -27.54 | AVG      |         |
| 7   |     | 0.2740 | 37.40            | 0.33              | 37.73            | 61.00 | -23.27 | QP       |         |
| 8   |     | 0.2740 | 25.80            | 0.33              | 26.13            | 51.00 | -24.87 | AVG      |         |
| 9   | *   | 0.4380 | 35.00            | 0.34              | 35.34            | 57.10 | -21.76 | QP       |         |
| 10  |     | 0.4380 | 20.70            | 0.34              | 21.04            | 47.10 | -26.06 | AVG      |         |
| 11  |     | 1.6260 | 27.90            | 0.41              | 28.31            | 56.00 | -27.69 | QP       |         |
| 12  |     | 1.6260 | 20.70            | 0.41              | 21.11            | 46.00 | -24.89 | AVG      |         |

\*:Maximum data x:Over limit

File: 80099\Data:#38 Page: 1

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## Config\_3\_L

Temperature: 25 °C Conduction Room Phase: Site : L1 Limit: FCC Class B Conduction(QP)

Mode: Config 3 play REC

Note: Hynix

AC 120V/60Hz Humidity: 64 % Power:

|             |            | Conducted                     | Emission                  |  |                   |
|-------------|------------|-------------------------------|---------------------------|--|-------------------|
| File: 80099 | Data       | #28                           | Date: 2017/8/             | 23   | Time: 上午 02:57:58 |
| O dBuV      |            |                               |                           |  |                   |
| ×           |            |                               |                           | FCC Class E  | Conduction(QP)    |
| T X         | ×          |                               |                           | FEE Class 0  | Conduction(AVG)   |
|             | IMAMALILIA | In I                          | in Marie                  | Mare.  |                   |
| 170         |            | dia 11 galloria plansagan aga | mary harding the for Mali | The state of the s | June 1            |
|             |            |                               |                           |  | No total and      |

| No. | Mk. | Freq.  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|--------|------------------|-------------------|------------------|-------|--------|----------|---------|
|     |     | MHz    | dBuV             | dB                | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   | *   | 0.1540 | 54.90            | 0.34              | 55.24            | 65.78 | -10.54 | QP       |         |
| 2   |     | 0.1540 | 34.20            | 0.34              | 34.54            | 55.78 | -21.24 | AVG      |         |
| 3   |     | 0.1780 | 52.30            | 0.33              | 52.63            | 64.58 | -11.95 | QP       |         |
| 4   |     | 0.1780 | 29.80            | 0.33              | 30.13            | 54.58 | -24.45 | AVG      |         |
| 5   |     | 0.2260 | 49.20            | 0.33              | 49.53            | 62.60 | -13.07 | QP       |         |
| 6   |     | 0.2260 | 24.40            | 0.33              | 24,73            | 52.60 | -27.87 | AVG      |         |
| 7   |     | 0.2740 | 46.40            | 0.33              | 46.73            | 61.00 | -14.27 | QP       |         |
| 8   |     | 0.2740 | 21.50            | 0.33              | 21.83            | 51.00 | -29.17 | AVG      |         |
| 9   |     | 0.3660 | 42.60            | 0.34              | 42.94            | 58.59 | -15.65 | QP       |         |
| 10  |     | 0.3660 | 24.30            | 0.34              | 24.64            | 48.59 | -23,95 | AVG      |         |
| 11  |     | 0.4620 | 42.80            | 0.34              | 43.14            | 56.66 | -13.52 | QP       |         |
| 12  |     | 0.4620 | 30.50            | 0.34              | 30.84            | 46.66 | -15.82 | AVG      |         |
|     |     |        |                  |                   |                  |       |        |          |         |

\*:Maximum data x:Over limit !:over margin

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## Config\_3\_N

Temperature: 25 °C Conduction Room Phase: Site : Limit: FCC Class B Conduction(QP)

Mode: Config 3 play REC

Note: Hynix

AC 120V/60Hz Humidity: 64 % Power:

|             | Conduct  | ed Emission  |                      |
|-------------|--|--|----------------------|
| File: 80099 | Data :#27  | Date: 2017/8/23  | Time: 上午 02:51:58    |
| 0.0 dBuV    |  |  |                      |
|             |  |  |                      |
|             |  |  |                      |
|             |  |  |                      |
| * "         |  | FCC Class  | B Conduction(QP)     |
| 1 X X       | 44444  |  |                      |
| XX          |  | FEC Cless  | 8 Conduction(AVG)    |
| WILL III    | Uici   |  |                      |
| 10          | W Lite   |  |                      |
| WAYN I WAYN | MUNICIPAL AND  | properties here in the state of |                      |
| TAKE.       | The health of the second   | I WANT MANAGE  |                      |
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|             | LAT. IA. MARIA WITH MANAGEMENT   | Jihille, ,   | Y www.               |
|             | 111  |  | Mary M               |
|             |  |  | Lather and have been |
|             |  |  | 10                   |
| .0          |  |  |                      |

| No. | Mk. | Freq.  | Mk. Freq. | Иk. Freq. | lk. Freq. | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit   | Over |  |  |
|-----|-----|--------|-----------|-----------|-----------|------------------|-------------------|------------------|---------|------|--|--|
|     |     | MHz    | dBuV      | dB        | dBuV      | dBuV             | dB                | Detector         | Comment |      |  |  |
| 1   | *   | 0.1540 | 54.70     | 0.42      | 55.12     | 65.78            | -10.66            | QP               |         |      |  |  |
| 2   |     | 0.1540 | 34.20     | 0.42      | 34.62     | 55.78            | -21.16            | AVG              |         |      |  |  |
| 3   |     | 0.1900 | 51.30     | 0.41      | 51,71     | 64.04            | -12.33            | QP               |         |      |  |  |
| 4   |     | 0.1900 | 28.40     | 0.41      | 28.81     | 54.04            | -25.23            | AVG              |         |      |  |  |
| 5   |     | 0.2220 | 48.90     | 0.41      | 49.31     | 62.74            | -13.43            | QP               |         |      |  |  |
| 6   |     | 0.2220 | 24.40     | 0.41      | 24.81     | 52.74            | -27,93            | AVG              |         |      |  |  |
| 7   |     | 0.2700 | 46.60     | 0.41      | 47.01     | 61.12            | -14.11            | QP               |         |      |  |  |
| 8   |     | 0.2700 | 22.20     | 0.41      | 22.61     | 51.12            | -28.51            | AVG              |         |      |  |  |
| 9   |     | 0.3180 | 43.90     | 0.42      | 44.32     | 59.76            | -15.44            | QP               |         |      |  |  |
| 10  |     | 0.3180 | 20.30     | 0.42      | 20.72     | 49.76            | -29.04            | AVG              |         |      |  |  |
| 11  |     | 0.3660 | 41.90     | 0.42      | 42.32     | 58.59            | -16.27            | QP               |         |      |  |  |
| 12  |     | 0.3660 | 21.70     | 0.42      | 22.12     | 48.59            | -26.47            | AVG              |         |      |  |  |

\*:Maximum data x:Over limit !:over margin

File :80099\Data :#27

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#### 2.5 Test of Radiated Emission

## 2.5.1 Test Equipments

#### **Below 1GHz**

|   | SGS Radiated_B        | selow_1GHz HWAYA    | 10m_EMC           |             |             |
|---|-----------------------|---------------------|-------------------|-------------|-------------|
| EQUIPMENT TYPE                                  | Manufacturer          | Model Number        | Serial            | Calibration | Calibration |
| EQUIPMENT TYPE                                  | Manufacturer          | Model Number        | Number            | Date        | Due         |
| EMI Test Receiver                               | R&S                   | ESCI 7              | 100924            | 2016/9/30   | 2017/9/29   |
| EMI Test Receiver                               | R&S                   | ESCI 3              | 101343            | 2016/12/21  | 2017/12/20  |
| Broadband Antenna                               | SCHWAZBECK            | VULB9168            | 9168-628          | 2016/9/22   | 2017/9/21   |
| Broadband Antenna                               | SCHWAZBECK            | VULB9168            | 9168-629          | 2016/9/22   | 2017/9/21   |
| Pre Amplifier                                   | EMC Instruments Corp. | EMC330              | 980178            | 2017/3/31   | 2018/3/30   |
| Pre Amplifier                                   | EMC Instruments Corp. | EMC330              | 980179            | 2017/3/31   | 2018/3/30   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150917            | 2016/9/18   | 2017/9/17   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150919            | 2016/9/18   | 2017/9/17   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150820            | 2016/9/18   | 2017/9/17   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150918            | 2016/9/18   | 2017/9/17   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150821            | 2016/9/18   | 2017/9/17   |
| Coaxial Cable                                   | EMC Instruments       | EMCCFD400-NM-<br>NM | 150822            | 2016/9/18   | 2017/9/17   |
| Universal Digital Radio<br>Communication Tester | R&S                   | CMU 200             | 122498            | 2016/11/9   | 2017/11/8   |
| Wideband Radio<br>Communication Tester          | R&S                   | CMW 500             | 152303            | 2017/2/23   | 2018/2/22   |
| Controller                                      | MF                    | MF-7802             | N/A               | N.C.R.      | N.C.R.      |
| Controller                                      | MF                    | MF-7802             | N/A               | N.C.R.      | N.C.R.      |
| Antenna Master                                  | MF                    | N/A                 | N/A               | N.C.R.      | N.C.R.      |
| Antenna Master                                  | MF                    | N/A                 | N/A               | N.C.R.      | N.C.R.      |
| Antenna Master                                  | MF                    | N/A                 | N/A               | N.C.R.      | N.C.R.      |
| Turn Table                                      | MF                    | N/A                 | N/A               | N.C.R.      | N.C.R.      |
| Site NSA  | Chance Most           | 10M Chamber         | 10M SAC           | 2016/12/31  | 2017/12/31  |
| Test S/W  | Farad                 | EZ-EMC              | Ver. SGS-<br>03A2 | N.C.R.      | N.C.R.      |

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Measurement Uncertainty of Radiated Emission

Expanded uncertainty of radiated emission is 4.09 dB. (30MHz ~ 1000MHz)

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#### **Above 1GHz**

|   | SGS Radiated_Ab | ove_1GHz HWA     | YA 966B_EMC      |             |             |
|---|-----------------|------------------|------------------|-------------|-------------|
| EQUIPMENT TYPE                                  | Manufacturer    | Model Number     | Serial Number    | Calibration | Calibration |
|   | D00             | <b>50</b> ) / 40 | 101110           | Date        | Due         |
| Spectrum Analyzer                               | R&S             | FSV 40           | 101419           | 2017/3/1    | 2018/2/28   |
| EMI Test Receiver                               | R&S             | ESR 7            | 101507           | 2017/5/27   | 2018/5/26   |
| Horn Antenna                                    | SCHWARZBEC<br>K | BBHA9120D        | BBHA9120D67<br>3 | 2016/10/14  | 2017/10/13  |
| Pre Amplifier                                   | R&S             | SCU-18           | 100203           | 2017/3/26   | 2018/3/26   |
| Coaxial Cable                                   | EMC Instruments | EMC104-SM-<br>SM | 140923           | 2016/9/30   | 2017/9/29   |
| Coaxial Cable                                   | EMC Instruments | EMC104-SM-<br>SM | 140925           | 2016/9/30   | 2017/9/29   |
| Coaxial Cable                                   | EMC Instruments | EMC104-SM-<br>SM | 140927           | 2016/9/30   | 2017/9/29   |
| Coaxial Cable                                   | Huber+Suhner    | SUCOFLEX 102     | MY 2152/2        | 2017/6/5    | 2018/6/4    |
| Coaxial Cable                                   | Huber+Suhner    | SUCOFLEX 102     | MY 2153/2        | 2017/6/5    | 2018/6/4    |
| Universal Digital Radio<br>Communication Tester | R&S             | CMU 200          | 122498           | 2016/11/9   | 2017/11/8   |
| Wideband Radio<br>Communication Tester          | R&S             | CMW 500          | 152303           | 2017/2/23   | 2018/2/22   |
| Controller                                      | MF-7802         | N/A              | N/A              | N.C.R.      | N.C.R.      |
| Antenna Master                                  | N/A             | N/A              | N/A              | N.C.R.      | N.C.R.      |
| Turn Table                                      | N/A             | N/A              | N/A              | N.C.R.      | N.C.R.      |
| Site VSWR                                       | SGS             | 966 Chamber B    | SAC-B            | 2016/10/8   | 2017/10/7   |
| Test S/W  | Farad           | EZ-EMC           | Ver. SGS-03A2    | N.C.R.      | N.C.R.      |

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Measurement Uncertainty of Radiated Emission

Expanded uncertainty (k=2) of radiated emission measurement is 5.06 dB. (1-6GHz)

Expanded uncertainty (k=2) of radiated emission measurement is 5.15 dB. (6-18GHz)

## 2.5.2 Operating Environment

Temperature: 25 degree C Humidity: 65 %RH

Atmospheric Pressure: 996 mBar

#### 2.5.3 Measurement Level Calculation

Correction Factor = Antenna Factor + Cable loss- Amplifier Gain Measurement Level = Reading Level + Correction Factor Over (Margin) = Measurement Level - Limit

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SGS

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### 2.5.4 Measurement Data

#### **Below 1GHz**

## Config\_1\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 1

Note: Sample 2 LTE B5 Link

Polarization: Horizontal Power: AC 120V/60Hz

Temperature: 27°C

Humidity: 64 %

Distance:

Radiated Emission



| No. | Mk. | Freq.    | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit  | Over   |          |         |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV             | dB/m              | dBuV/m           | dBuV/m | dB     | Detector | Comment |
| 1   |     | 32.2400  | 26.62            | -12.72            | 13.90            | 30.00  | -16.10 | QP       |         |
| 2   |     | 47.9600  | 26,90            | -11.40            | 15.50            | 30.00  | -14.50 | QP       |         |
| 3   |     | 146.4600 | 25.75            | -12.05            | 13.70            | 30,00  | -16.30 | QP       |         |
| 4   |     | 923.5900 | 25.08            | 1.32              | 26 40            | 37.00  | -10.60 | QP       |         |
| 5   |     | 943,9800 | 25.04            | 1.76              | 26.80            | 37.00  | -10.20 | QP       |         |
| 6   | *   | 972,1100 | 25.05            | 1.85              | 26,90            | 37.00  | -10.10 | QP       |         |

\*: Maximum data x:Over limit !:over margin

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## Config\_1\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 1

Note: Sample 2 LTE B5 Link

Polarization: Vertical

Power: AC 120V/60Hz

Distance:

Temperature: 27 °C

Humidity: 64 %

Radiated Emission

Date: 2017/8/29

Time: |-+ 07:42:37



| No. | o. Mk. | 707/20   | Freq. | Freq.  | Freq.  | 77.1 75.72.20 | 1 707/20 | 767/20   | 767/20  | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over |  |  |
|-----|--------|----------|-------|--------|--------|---------------|----------|----------|---------|------------------|-------------------|------------------|-------|------|--|--|
|     |        | MHz      | dBuV  | dB/m   | dBuV/m | dBuV/m        | dB       | Detector | Comment |                  |                   |                  |       |      |  |  |
| 1   |        | 32.6900  | 29.66 | -12.36 | 17:30  | 30.00         | -12.70   | QP       |         |                  |                   |                  |       |      |  |  |
| 2   |        | 135.6500 | 26.25 | -11.95 | 14.30  | 30.00         | -15.70   | QP       |         |                  |                   |                  |       |      |  |  |
| 3   |        | 744.2600 | 24.58 | -0.68  | 23.90  | 37.00         | -13.10   | QP       |         |                  |                   |                  |       |      |  |  |
| 4   |        | 891.6200 | 24.37 | 0.83   | 25.20  | 37.00         | -11.80   | QP       |         |                  |                   |                  |       |      |  |  |
| 5   |        | 938.7100 | 24.47 | 1.23   | 25.70  | 37.00         | -11.30   | QP       |         |                  |                   |                  |       |      |  |  |
| 6   | *      | 988,1200 | 24.65 | 1.75   | 26.40  | 37.00         | -10.60   | QP       |         |                  |                   |                  |       |      |  |  |

\*: Maximum data x:Over limit !:over margin

File :80099\Data :#21

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## Config\_2\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 2

Note: Sample 2 Internal shared sorage Write

Polarization: Horizontal From System

Temperature: 25 7

Humidity: 65 %

Power: Distance:

Radiated Emission



| No. | o. Mk. | Freq.    | MHz   | 75.722 | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over     |         |  |
|-----|--------|----------|-------|--------|------------------|-------------------|------------------|-------|----------|---------|--|
|     |        |          |       | dBuV   | dB/m             | dBuV/m            | dBuV/m           | dB    | Detector | Comment |  |
| 1   |        | 55.3800  | 27.04 | -11.84 | 15.20            | 30.00             | -14.80           | QP    |          |         |  |
| 2   | 0.00   | 150.1800 | 27.40 | -11.90 | 15.50            | 30.00             | -14.50           | QP    |          |         |  |
| 3   |        | 165,9000 | 30.18 | -11.78 | 18.40            | 30,00             | -11.60           | QP    |          |         |  |
| 4   |        | 204.8600 | 30.34 | -14.94 | 15.40            | 30.00             | -14.60           | QP    |          |         |  |
| 5   |        | 224,8300 | 32.20 | -14.70 | 17.50            | 30.00             | -12.50           | QP    |          |         |  |
| 6   | *      | 955,7000 | 24.72 | 1.88   | 26.60            | 37.00             | -10.40           | QP    |          |         |  |

\*: Maximum data x:Over limit !:over margin

File :80099\Data :#18

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## Config\_2\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 2

Note: Sample 2 Internal shared sorage Write

Polarization: Vertical

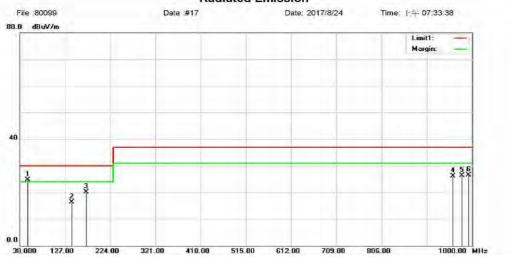
Power: From System

Distance:

Temperature: 25 7

Humidity: 65 %

Radiated Emission



| No. | o. Mk. |          |       |        | Freq.  | Freq.  |        | Mk. Freq. | Mk. Freq. | Freq. | Freq. | Freq. | Freq. | Freq. | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over |  |  |
|-----|--------|----------|-------|--------|--------|--------|--------|-----------|-----------|-------|-------|-------|-------|-------|------------------|-------------------|------------------|-------|------|--|--|
|     |        | MHz      | dBuV  | dB/m   | dBuV/m | dBuV/m | dB     | Detector  | Comment   |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 1   | *      | 47.1100  | 35.73 | -11.03 | 24.70  | 30.00  | -5.30  | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 2   |        | 140.7800 | 27.97 | -11.57 | 16.40  | 30.00  | -13.60 | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 3   |        | 172.0600 | 32.27 | -12.17 | 20.10  | 30.00  | -9.90  | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 4   |        | 958.6300 | 24.70 | 1.40   | 26 10  | 37.00  | -10.90 | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 5   |        | 977.9300 | 24.77 | 1.63   | 26.40  | 37.00  | -10.60 | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |
| 6   |        | 993.0700 | 24.79 | 1.81   | 26.60  | 37.00  | -10.40 | QP        |           |       |       |       |       |       |                  |                   |                  |       |      |  |  |

\*: Maximum data x:Over limit !:over margin

File :80099\Data :#17

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## Config\_3\_H

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 3

Note: Sample 2 REC Back

Polarization: Horizontal

Power: AC 120V/60Hz

Distance:

Temperature: 25 %

Humidity: 65 %

Radiated Emission



| No. | o. Mk. | Freq.    | Freq. | Freq.  | Freq.  | Иk. Freq. | and the state of | Mk. Freq. | Freq.   | . Freq. | . Freq. | Freq. | c. Freq. | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over |  |  |
|-----|--------|----------|-------|--------|--------|-----------|------------------|-----------|---------|---------|---------|-------|----------|------------------|-------------------|------------------|-------|------|--|--|
|     |        | MHz      | dBuV  | dB/m   | dBuV/m | dBuV/m    | dB               | Detector  | Comment |         |         |       |          |                  |                   |                  |       |      |  |  |
| 1   |        | 54.4900  | 26.06 | -11.76 | 14.30  | 30.00     | -15.70           | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |
| 2   | 4      | 166.9500 | 25.71 | -11.81 | 13,90  | 30.00     | -16.10           | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |
| 3   | 1 1 1  | 853.7300 | 25.05 | 0.15   | 25,20  | 37.00     | -11.80           | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |
| 4   | 111    | 889.1200 | 24.95 | 0.65   | 25.60  | 37.00     | -11.40           | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |
| 5   |        | 938.1400 | 25.26 | 1.64   | 26.90  | 37.00     | -10.10           | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |
| 6   | *      | 966.7600 | 25.23 | 1.87   | 27.10  | 37.00     | -9.90            | QP        |         |         |         |       |          |                  |                   |                  |       |      |  |  |

\*: Maximum data x:Over limit !:over margin

File :80099\Data :#20

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## Config\_3\_V

Site SGS 10m Chamber

Limit: CISPR22 Class B 10M Radiation

Mode: Config 3

Note: Sample 2 REC Back

Polarization: Vertical Power: AC 120V/60Hz

Temperature: 25 7

Humidity: 65 %

Distance:

#### Radiated Emission



| No. | Mk. | Freq.    | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit  | Over   |    |          |         |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----|----------|---------|
|     |     | MHz      | MHz              | dBuV              | dB/m             | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1   |     | 42.4900  | 25.78            | -11.28            | 14.50            | 30.00  | -15.50 | QP |          |         |
| 2   |     | 53.4400  | 25,68            | -11.28            | 14.40            | 30.00  | -15.60 | QP |          |         |
| 3   |     | 135.0400 | 25.40            | -12.00            | 13.40            | 30.00  | -16.60 | QP |          |         |
| 4   |     | 890.2300 | 24.50            | 0.80              | 25.30            | 37.00  | -11.70 | QP |          |         |
| 5   |     | 963.0600 | 24.75            | 1,45              | 26.20            | 37.00  | -10.80 | QP |          |         |
| 6   | *   | 976.9400 | 24.77            | 1.63              | 26.40            | 37.00  | -10.60 | QP |          |         |

\*: Maximum data x:Over limit !:over margin

File :80099\Data :#19

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#### **Above 1GHz**

## Config\_1\_H

Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

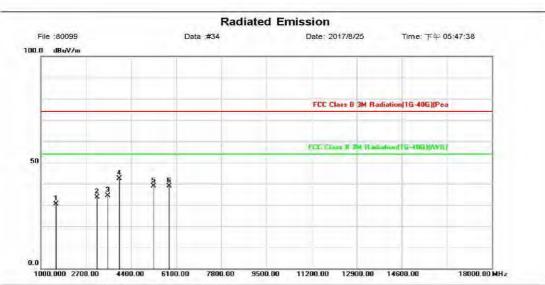
Mode: Config\_1 Note: LTE B5 Link Polarization: Horizontal

Power: AC 120V/60Hz

Temperature: Humidity: 68 %

22 %

Distance



| No. | Mk. | Freq.    | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit  | Over   |          |         |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV             | dB/m              | dBuV/m           | dBuV/m | dB     | Detector | Comment |
| 1   |     | 1578.000 | 46.92            | -16.52            | 30.40            | 74.00  | -43.60 | peak     |         |
| 2   |     | 3125.000 | 46.57            | -12.89            | 33.68            | 74.00  | -40.32 | peak     |         |
| 3   |     | 3533.000 | 46.97            | -12.52            | 34,45            | 74.00  | -39.55 | peak     |         |
| 4   | *   | 3958.000 | 53.69            | -11.41            | 42.28            | 74,00  | -31.72 | peak     |         |
| 5   |     | 5250.000 | 46.96            | -8.20             | 38.76            | 74.00  | -35.24 | peak     |         |
| 6   |     | 5828.000 | 46.18            | -7,31             | 38.87            | 74.00  | -35.13 | peak     |         |

\*:Maximum data x:Over limit !:over margin

File: 80099\Data: #34

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## Config\_1\_V

Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config\_1 Note: LTE B5 Link Polarization: Vertical

AC 120V/60Hz

Distance

22 %

Humidity: 68 %

Radiated Emission File: 80099 Data :#33 Date: 2017/8/25 Time: 下午 05:45:42 100 ft dRuV/m



| No. | o. Mk. | Freq.    | Freq. | Freq.  | Level  | Factor | ment   | Limit    | Over    |  |  |
|-----|--------|----------|-------|--------|--------|--------|--------|----------|---------|--|--|
|     |        | MHz      | dBuV  | dB/m   | dBuV/m | dBuV/m | dB     | Detector | Comment |  |  |
| 1   |        | 1527.000 | 46.98 | -16.64 | 30.34  | 74.00  | -43.66 | peak     |         |  |  |
| 2   |        | 2666.000 | 47.62 | -13.74 | 33.88  | 74.00  | -40.12 | peak     |         |  |  |
| 3   |        | 3618.000 | 46.79 | -12.29 | 34.50  | 74.00  | -39.50 | peak     |         |  |  |
| 4   |        | 3958,000 | 48.65 | -11.41 | 37.24  | 74,00  | -36.76 | peak     |         |  |  |
| 5   | *      | 5386,000 | 48.61 | -8.04  | 40.57  | 74.00  | -33,43 | peak     |         |  |  |
| 6   | 111    | 6066.000 | 46.00 | -6.74  | 39.26  | 74.00  | -34.74 | peak     |         |  |  |
|     |        |          |       |        |        |        |        |          |         |  |  |

\*:Maximum data x:Over limit !:over margin

File: 80099\Data: #33

Page: 1

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## Config\_2\_H

Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config\_2

Note: Internal shared sorage Write

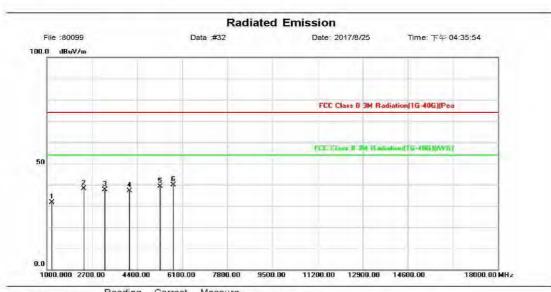
Polarization: Horizontal From System

Temperature:

22 %

Humidity: 68 %

Distance:



| No. | o. Mk. |          | Freq. | c. Freq. | Level  | Factor | ment   | Limit    | Over    |  |  |
|-----|--------|----------|-------|----------|--------|--------|--------|----------|---------|--|--|
|     |        | MHz      | dBuV  | dB/m     | dBuV/m | dBuV/m | dB     | Detector | Comment |  |  |
| 1   |        | 1187.000 | 49.33 | -17.82   | 31.51  | 74.00  | -42.49 | peak     |         |  |  |
| 2   |        | 2394.000 | 52.52 | -14.42   | 38.10  | 74.00  | -35.90 | peak     |         |  |  |
| 3   |        | 3176.000 | 50.51 | -12.86   | 37.65  | 74.00  | -36.35 | peak     |         |  |  |
| 4   |        | 4111.000 | 48.06 | -11.05   | 37.01  | 74.00  | -36.99 | peak     |         |  |  |
| 5   |        | 5267.000 | 47.35 | -8.18    | 39.17  | 74.00  | -34.83 | peak     |         |  |  |
| 6   | *      | 5777.000 | 47.23 | -7,40    | 39.83  | 74.00  | -34.17 | peak     |         |  |  |
|     |        |          |       |          |        |        |        |          |         |  |  |

\*:Maximum data x:Over limit !:over margin

File: 80099\Data: #32

Page: 1

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## Config\_2\_V

Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config\_2

Note: Internal shared sorage Write

Polarization: Vertical From System

22 %

18000.00 MHz

Humidity: 68 %

Distance:

Radiated Emission File: 80099 Data :#31 Date: 2017/8/25 Time: 下午 04:34:13 100 ft dRuV/m

| No. | Mk. | Freq.    | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit  | Over   |          |         |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV             | dB/m              | dBuV/m           | dBuV/m | dB     | Detector | Comment |
| 1   |     | 1391.000 | 51.63            | -17.10            | 34.53            | 74.00  | -39.47 | peak     |         |
| 2   | *   | 2394.000 | 60.58            | -14.42            | 46.16            | 74.00  | -27.84 | peak     |         |
| 3   |     | 2989.000 | 54.91            | -13.03            | 41.88            | 74.00  | -32.12 | peak     |         |
| 4   |     | 3176,000 | 56.17            | -12.86            | 43,31            | 74.00  | -30.69 | peak     |         |
| 5   |     | 4128.000 | 50.58            | -11.02            | 39,56            | 74.00  | -34.44 | peak     |         |
| 6   |     | 5998.000 | 46.90            | -7.00             | 39.90            | 74.00  | -34.10 | peak     |         |
|     |     |          |                  |                   |                  |        |        |          |         |

\*:Maximum data x:Over limit !:over margin

File: 80099\Data:#31

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## Config\_3\_H

Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

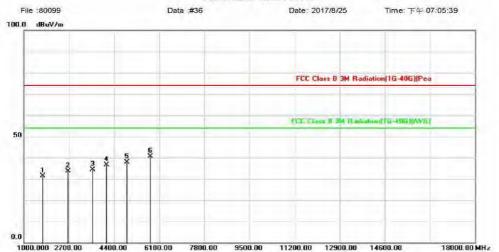
Mode: Config\_3 Note: REC Back Polarization: Horizontal AC 120V/60Hz

22 %

Humidity: 68 %

Distance

Radiated Emission



| No. M | Mk. | Freq.    | Level | Factor | ment   | Limit  | Over   |          |         |
|-------|-----|----------|-------|--------|--------|--------|--------|----------|---------|
|       |     | MHz      | dBuV  | dB/m   | dBuV/m | dBuV/m | dB     | Detector | Comment |
| 1     |     | 1714.000 | 47.52 | -16.23 | 31.29  | 74.00  | -42.71 | peak     |         |
| 2     |     | 2666.000 | 47.44 | -13.74 | 33.70  | 74.00  | -40.30 | peak     |         |
| 3     |     | 3584.000 | 46.86 | -12.39 | 34.47  | 74.00  | -39.53 | peak     |         |
| 4     |     | 4111,000 | 47.80 | -11.05 | 36.75  | 74,00  | -37,25 | peak     |         |
| 5     |     | 4876,000 | 46.78 | -8.91  | 37.87  | 74.00  | -36.13 | peak     |         |
| 6     | *   | 5777.000 | 47.96 | -7.40  | 40.56  | 74.00  | -33,44 | peak     |         |
|       |     |          |       |        |        |        |        |          |         |

\*:Maximum data x:Over limit !:over margin

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Site SGS 966 Chamber B

Limit: FCC Class B 3M Radiation(1G-40G)(Pea

Mode: Config\_3 Note: REC Back Polarization: Vertical

Power: AC 120V/60Hz

22 %

18000.00 MHz

Humidity: 68 %

Distance

Radiated Emission

File: 80099 Data :#35 Date: 2017/8/25 Time: 下午 07:03:34 100 ft dRuV/m

| No. | Mk. | Freq.    | Reading<br>Level | Correct | Measure-<br>ment | Limit  | Over   |          |         |
|-----|-----|----------|------------------|---------|------------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV             | dB/m    | dBuV/m           | dBuV/m | dB     | Detector | Comment |
| 1   |     | 2241.000 | 47.00            | -14.89  | 32.11            | 74.00  | -41.89 | peak     |         |
| 2   |     | 3057.000 | 46.98            | -12.96  | 34.02            | 74.00  | -39.98 | peak     |         |
| 3   |     | 3567.000 | 46.99            | -12.42  | 34.57            | 74.00  | -39.43 | peak     |         |
| 4   |     | 4128.000 | 47.27            | -11.02  | 36.25            | 74.00  | -37.75 | peak     |         |
| 5   |     | 5488.000 | 47.99            | -7.91   | 40.08            | 74.00  | -33.92 | peak     |         |
| 6   | *   | 5828.000 | 48.34            | -7,31   | 41,03            | 74.00  | -32.97 | peak     |         |
|     |     |          |                  |         |                  |        |        |          |         |

\*:Maximum data x:Over limit !:over margin

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