









# **TEST REPORT**

Applicant Name: Grandstream Networks, Inc.

Address: 126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

Report Number: SZ1220620-27490E-EM-01

FCC ID: YZZHT801V60

#### Test Standard (s)

FCC Rules and Regulations Part 15 Subpart B

#### **Sample Description**

Analog Telephone Adapter Product:

**GRANDSTREAM** Trade Mark:

HT801 Tested Model:

2022-06-20 Date Received:

2022-06-29 to 2022-07-15 Date of Test:

2022-07-23 Report Date:

Test Result: Pass\*

Prepared and Checked By: Approved By:

Zeki Ma Candy, Ci

Zeki Ma Candy Li

**EMC Engineer EMC Engineer** 

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

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Shenzhen Accurate Technology Co., Ltd.

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<sup>\*</sup> In the configuration tested, the EUT complied with the standards above.

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# **Test Report Declaration**

Report No.: SZ1220620-27490E-EM-01

Applicant : Grandstream Networks, Inc.

Manufacturer : Grandstream Networks, Inc.

Product : Analog Telephone Adapter

Model No. : HT801

Measurement Procedure Used:

# FCC Rules and Regulations Part 15 Subpart B ANSI C63.4-2014

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

# 1. TEST RESULTS SUMMARY

| Test Items                    | Test Standard                         | Test Results |
|-------------------------------|---------------------------------------|--------------|
| Power Line Conducted Emission | FCC Part 15 Subpart B, Section 15.107 | Pass         |
| Radiated Emission             | FCC Part 15 Subpart B, Section 15.109 | Pass         |

Report No.: SZ1220620-27490E-EM-01

## 2. GENERAL INFORMATION

## 2.1.Description of Device (EUT)

Product : Analog Telephone Adapter

Model No. : HT801

Rating : Input: DC 5V == 1.0A

Adapter 1 : Switching Adapter

Model:DSA-6PFG-05 FUS 050100 INPUT:100-240V~50/60Hz 0.2A OUTPUT:+5.0V == 1.0A 5.0W

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Line Length: 1.50 meter

Adapter 2 : Switching Adapter

MODEL:GQ06-050100-ZU

INPUT:100-240V~50/60Hz 0.3A Max

output:5.0V == 1.0A Line Length: 1.50 meter

Adapter 3 : AC/DC POWER ADAPTER

MODEL: F06US0500100A

INPUT:AC100~240V 50/60HZ 0.2A MAX

OUTPUT:5V == 1A Line Length: 1.50 meter

Remark(s) : The EUT's highest operating frequency is 400MHz, the radiated

emission measurement shall be made up to 2GHz.

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Manufacturer : Grandstream Networks, Inc.

Address . 126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

Sample Number : SZ1220620-27490E-EM-S1

## 2.2.Test Mode

Test Mode: Working (Operation Talking System)

# 2.3. Accessory and Auxiliary Equipment

Fixed-line Telephone : Model name: HCD6238(20)P/TSDL16

Telephone : Name: IP Multimedia Phone

Model name: ITX-3370-1W(BK)TEL

Telephone line length: 1.25 meter

RJ45 Cable length : 1.45 meter

# 2.4. Description of Test Facility

Name of Firm : Shenzhen Accurate Technology Co., Ltd.

Site Location : 1/F., Building A, Changyuan New Material Port, Science &

Industry Park, Nanshan District, Shenzhen, Guangdong,

Report No.: SZ1220620-27490E-EM-01

P.R. China

# 2.5. Measurement Uncertainty

Conduction Emission Expanded Uncertainty : U=2.72dB, k=2

(0.15kHz-30MHz)

Radiated emission expanded uncertainty : U=4.28dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty : U=4.98dB, k=2

(1GHz -18GHz)

# 3. MEASURING DEVICE AND TEST EQUIPMENT

# 3.1.For Conducted Emission Test

| Item | Equipment  | Manufacturer             | Model No. | Serial No. | Calibration<br>Date | Calibration Due<br>Date |  |  |
|------|--|--------------------------|-----------|------------|---------------------|-------------------------|--|--|
| 1.   | EMI Test Receiver                                | Rohde &<br>Schwarz       | ESCI      | 100784     | 2021/12/13          | 2022/12/12              |  |  |
| 2.   | L.I.S.N.   | L.I.S.N. Rohde & Schwarz |           | 101314     | 2021/12/13          | 2022/12/12              |  |  |
| 3.   | 50 Coaxial Switch                                | Anritsu Corp             | MP59B     | 6100237248 | 2021/12/13          | 2022/12/12              |  |  |
| 4.   | RF Coaxial Cable                                 | Unknown                  | No.17     | N0350      | 2021/12/14          | 2022/12/13              |  |  |
| 5.   | Conducted Emission Test Software: e3 19821b (V9) |                          |           |            |                     |                         |  |  |

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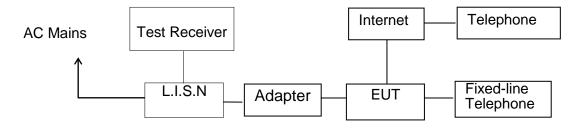
# 3.2.For Radiated Emission Measurement

| Item | Equipment                                       | Manufacturer         | Model No. | Serial No. | Calibration<br>Date | Calibration Due Date |  |  |  |
|------|---|----------------------|-----------|------------|---------------------|----------------------|--|--|--|
| 1.   | Test Receiver                                   | Rohde &<br>Schwarz   | ESR       | 102725     | 2021/12/13          | 2022/12/12           |  |  |  |
| 2.   | Spectrum<br>Analyzer                            | Rohde &<br>Schwarz   | FSV40     | 101949     | 2021/12/13          | 2022/12/12           |  |  |  |
| 3.   | Amplifier                                       | SONOMA<br>INSTRUMENT | 310 N     | 186131     | 2021/11/09          | 2022/11/08           |  |  |  |
| 6.   | Bilog Antenna                                   | Schwarzbeck          | VULB9163  | 9163-323   | 2021/07/06          | 2024/07/05           |  |  |  |
| 7.   | Horn Antenna                                    | Schwarzbeck          | BBHA9120D | 9120D-1067 | 2020/01/05          | 2023/01/04           |  |  |  |
| 8.   | A.H. Systems, inc.                              | Preamplifier         | PAM-0118P | 135        | 2021/11/09          | 2022/11/08           |  |  |  |
| 9.   | RF Coaxial<br>Cable                             | Unknown              | No.10     | N050       | 2021/12/14          | 2022/12/13           |  |  |  |
| 10.  | RF Coaxial<br>Cable                             | Unknown              | No.11     | N1000      | 2021/12/14          | 2022/12/13           |  |  |  |
| 11.  | RF Coaxial<br>Cable                             | Unknown              | No.12     | N040       | 2021/12/14          | 2022/12/13           |  |  |  |
| 12.  | RF Coaxial<br>Cable                             | Unknown              | No.13     | N300       | 2021/12/14          | 2022/12/13           |  |  |  |
| 13.  | RF Coaxial<br>Cable                             | Unknown              | No.14     | N800       | 2021/12/14          | 2022/12/13           |  |  |  |
| 14.  | Radiated Emission Test Software: e3 19821b (V9) |                      |           |            |                     |                      |  |  |  |

# 4. POWER LINE CONDUCTED MEASUREMENT

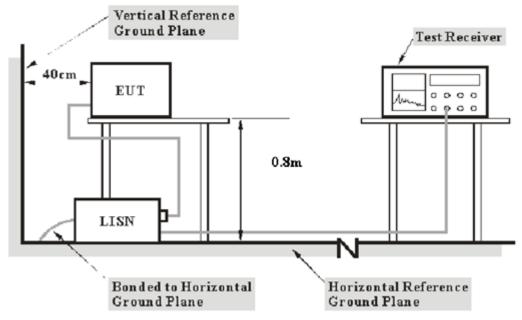
# 4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators



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## 4.1.2.Test System Setup



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

Both of LISNs (AMIN) 10mm from EUT and at the least 80 cm from other units and other metal planes support units.

## 4.2. Power Line Conducted Emission Measurement Limits (Class B)

Report No.: SZ1220620-27490E-EM-01

| Frequency    | Limit d          | Β(μV)         |  |  |
|--------------|------------------|---------------|--|--|
| (MHz)        | Quasi-peak Level | Average Level |  |  |
| 0.15 - 0.50  | 66.0 – 56.0 *    | 56.0 – 46.0 * |  |  |
| 0.50 - 5.00  | 56.0             | 46.0          |  |  |
| 5.00 - 30.00 | 60.0             | 50.0          |  |  |

NOTE1: The lower limit shall apply at the transition frequencies.

NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

#### 4.3.Manufacturer

The equipment are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

# 4.4. Operating Condition of EUT

- 4.4.1. Setup the EUT and simulator as shown as Section 4.1.
- 4.4.2. Turn on the power of all equipment.
- 4.4.3.Let the EUT work in test mode and measure it.

## 4.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

Over Limit =Level ( $dB\mu V$ ) - Limit ( $dB\mu V$ )

# 4.6.Power Line Conducted Emission Measurement Results **PASS.**

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT. Emissions attenuated more than 20 dB below the permissible value are not reported.

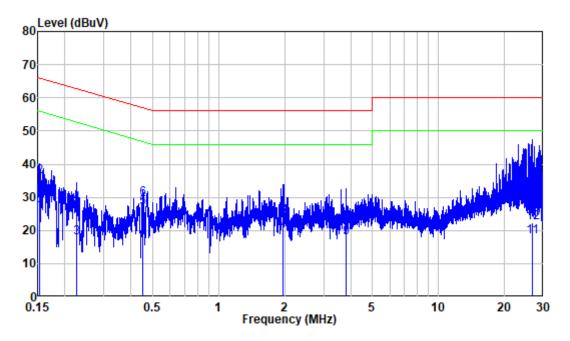
Report No.: SZ1220620-27490E-EM-01

All data was recorded in the Quasi-peak and average detection mode.

The spectral diagrams are attached as below.

| Job No.:  | SZ1220620-27490E-00             | Power:         | AC 120V 60Hz           |
|-----------|---------------------------------|----------------|------------------------|
| Eut No.:  | SZ1220620-27490E-EM-S1          | Test By:       | Jason Liu              |
| Eut:      | <b>Analog Telephone Adapter</b> | Test item:     | <b>Conduction Test</b> |
| Model:    | HT801                           | Test standard: | FCC Part 15B           |
| Climatic: | 25° C 49%RH                     | Date:          | 2022.6.29              |

# Adapter 1:



Site : Shielding Room

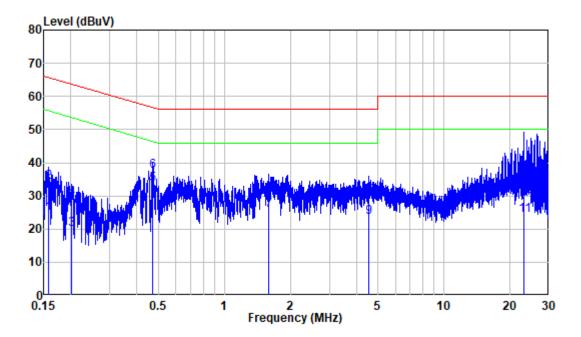
Condition: Line

Job No. : SZ1220620-27490E-00

Mode : Working Power : AC 120V 60Hz

Adapter : DSA-6PFG-05 FUS 050100

|    | Freq   | Factor | Read<br>Level | Level | Limit<br>Line | Over<br>Limit | Remark  |
|----|--------|--------|---------------|-------|---------------|---------------|---------|
|    | MHz    | dB     | dBuV          | dBuV  | dBuV          | dB            |         |
| 1  | 0.153  | 9.80   | 15.75         | 25.55 | 55.86         | -30.31        | Average |
| 2  | 0.153  | 9.80   | 26.32         | 36.12 | 65.86         | -29.74        | QP      |
| 3  | 0.226  | 9.80   | 8.06          | 17.86 | 52.61         | -34.75        | Average |
| 4  | 0.226  | 9.80   | 18.42         | 28.22 | 62.61         | -34.39        | QP      |
| 5  | 0.453  | 9.80   | 17.03         | 26.83 | 46.81         | -19.98        | Average |
| 6  | 0.453  | 9.80   | 19.81         | 29.61 | 56.81         | -27.20        | QP      |
| 7  | 1.971  | 9.82   | 10.76         | 20.58 | 46.00         | -25.42        | Average |
| 8  | 1.971  | 9.82   | 14.61         | 24.43 | 56.00         | -31.57        | QP      |
| 9  | 3.797  | 9.84   | 8.06          | 17.90 | 46.00         | -28.10        | Average |
| 10 | 3.797  | 9.84   | 12.21         | 22.05 | 56.00         | -33.95        | QP      |
| 11 | 26.629 | 10.07  | 8.00          | 18.07 | 50.00         | -31.93        | Average |
| 12 | 26.629 | 10.07  | 12.21         | 22.28 | 60.00         | -37.72        | QP      |



Site : Shielding Room

Condition: Neutral

Job No. : SZ1220620-27490E-00

Mode : Working

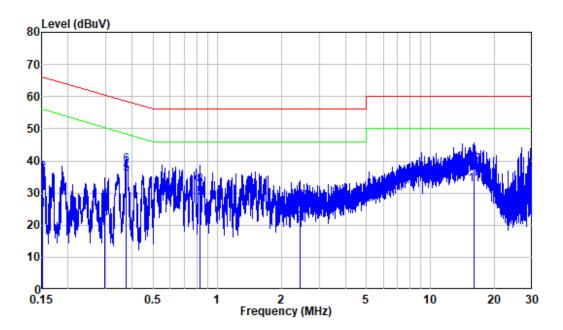
Power : AC 120V 60Hz

Adapter : DSA-6PFG-05 FUS 050100

|    | Freq   | Factor | Read<br>Level | Level | Limit<br>Line | Over<br>Limit | Remark  |
|----|--------|--------|---------------|-------|---------------|---------------|---------|
|    | MHz    | dB     | dBuV          | dBuV  | dBuV          | dB            |         |
| 1  | 0.158  | 9.80   | 15.06         | 24.86 | 55.58         | -30.72        | Average |
| 2  | 0.158  | 9.80   | 24.25         | 34.05 | 65.58         | -31.53        | QP      |
| 3  | 0.201  | 9.80   | 10.25         | 20.05 | 53.57         | -33.52        | Average |
| 4  | 0.201  | 9.80   | 19.55         | 29.35 | 63.57         | -34.22        | QP      |
| 5  | 0.472  | 9.80   | 23.82         | 33.62 | 46.48         | -12.86        | Average |
| 6  | 0.472  | 9.80   | 27.58         | 37.38 | 56.48         | -19.10        | QP      |
| 7  | 1.589  | 9.82   | 15.93         | 25.75 | 46.00         | -20.25        | Average |
| 8  | 1.589  | 9.82   | 20.73         | 30.55 | 56.00         | -25.45        | QP      |
| 9  | 4.534  | 9.87   | 13.81         | 23.68 | 46.00         | -22.32        | Average |
| 10 | 4.534  | 9.87   | 19.93         | 29.80 | 56.00         | -26.20        | QP      |
| 11 | 23.140 | 10.13  | 14.16         | 24.29 | 50.00         | -25.71        | Average |
| 12 | 23.140 | 10.13  | 19.65         | 29.78 | 60.00         | -30.22        | QP      |

#### Report No.: SZ1220620-27490E-EM-01

# Adapter 2:



Site : Shielding Room

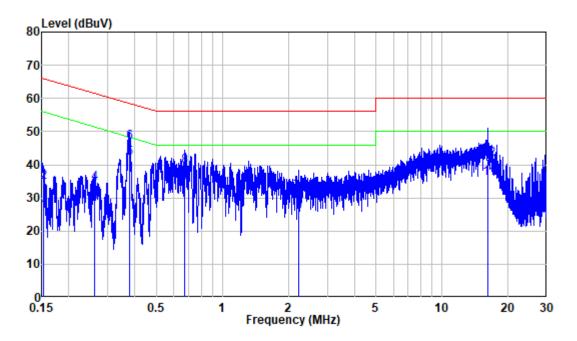
Condition: Line

Job No. : SZ1220620-27490E-00

Mode : Working

Power : AC 120V 60Hz Adapter : GQ06-050100-ZU

|    | Freq   | Factor | Read<br>Level | Level | Limit<br>Line | Over<br>Limit | Remark  |
|----|--------|--------|---------------|-------|---------------|---------------|---------|
|    | MHz    | dB     | dBuV          | dBuV  | dBuV          | dB            |         |
| 1  | 0.151  | 9.80   | 14.82         | 24.62 | 55.93         | -31.31        | Average |
| 2  | 0.151  | 9.80   | 26.51         | 36.31 | 65.93         | -29.62        | QP      |
| 3  | 0.296  | 9.80   | 12.24         | 22.04 | 50.35         | -28.31        | Average |
| 4  | 0.296  | 9.80   | 18.09         | 27.89 | 60.35         | -32.46        | QP      |
| 5  | 0.373  | 9.80   | 26.20         | 36.00 | 48.43         | -12.43        | Average |
| 6  | 0.373  | 9.80   | 28.78         | 38.58 | 58.43         | -19.85        | QP      |
| 7  | 0.830  | 9.81   | 18.63         | 28.44 | 46.00         | -17.56        | Average |
| 8  | 0.830  | 9.81   | 22.40         | 32.21 | 56.00         | -23.79        | QP      |
| 9  | 2.436  | 9.82   | 10.83         | 20.65 | 46.00         | -25.35        | Average |
| 10 | 2.436  | 9.82   | 17.47         | 27.29 | 56.00         | -28.71        | QP      |
| 11 | 15.980 | 9.96   | 22.73         | 32.69 | 50.00         | -17.31        | Average |
| 12 | 15.980 | 9.96   | 28.79         | 38.75 | 60.00         | -21.25        | QP      |



Site : Shielding Room

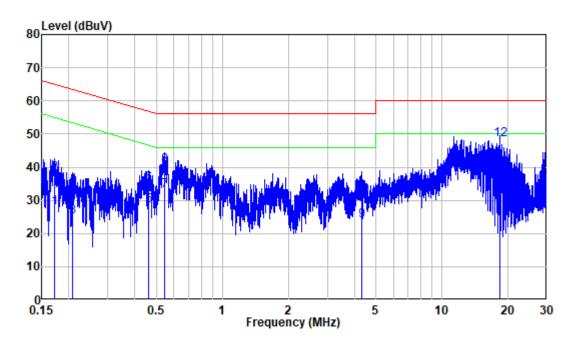
Condition: Neutral

Job No. : SZ1220620-27490E-00

Mode : Working Power : AC 120V 60Hz Adapter : GQ06-050100-ZU

|    |        |        | Read  |       | Limit | 0ver   |         |
|----|--------|--------|-------|-------|-------|--------|---------|
|    | Freq   | Factor | Level | Level | Line  | Limit  | Remark  |
|    | MHz    | dB     | dBuV  | dBuV  | dBuV  | dB     |         |
| 1  | 0.154  | 9.80   | 16.13 | 25.93 | 55.79 | -29.86 | Average |
| 2  | 0.154  | 9.80   | 24.94 | 34.74 | 65.79 | -31.05 | QP      |
| 3  | 0.263  | 9.80   | 18.91 | 28.71 | 51.35 | -22.64 | Average |
| 4  | 0.263  | 9.80   | 24.74 | 34.54 | 61.35 | -26.81 | QP      |
| 5  | 0.378  | 9.80   | 32.13 | 41.93 | 48.33 | -6.40  | Average |
| 6  | 0.378  | 9.80   | 37.08 | 46.88 | 58.33 | -11.45 | QP      |
| 7  | 0.672  | 9.81   | 23.46 | 33.27 | 46.00 | -12.73 | Average |
| 8  | 0.672  | 9.81   | 29.88 | 39.69 | 56.00 | -16.31 | QP      |
| 9  | 2.232  | 9.82   | 15.90 | 25.72 | 46.00 | -20.28 | Average |
| 10 | 2.232  | 9.82   | 22.56 | 32.38 | 56.00 | -23.62 | QP      |
| 11 | 16.236 | 10.06  | 25.93 | 35.99 | 50.00 | -14.01 | Average |
| 12 | 16.236 | 10.06  | 31.70 | 41.76 | 60.00 | -18.24 | QP      |

# Adapter 3:



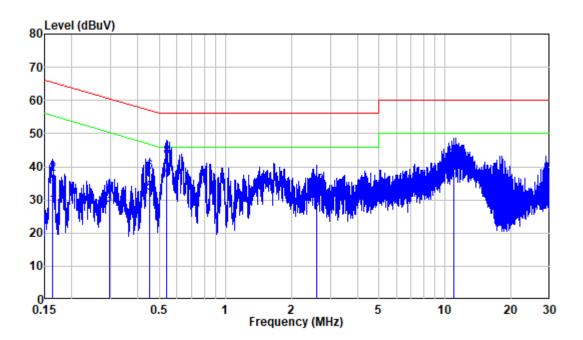
Site : Shielding Room

Condition: Line

Job No. : SZ1220620-27490E-00

Mode : Working Power : AC 120V 60Hz Adapter : F06US0500100A

|    | Freq   | Factor | Read<br>Level | Level | Limit<br>Line | Over<br>Limit | Remark  |
|----|--------|--------|---------------|-------|---------------|---------------|---------|
|    | MHz    | dB     | dBuV          | dBuV  | dBuV          | dB            |         |
| 1  | 0.172  | 9.80   | 17.99         | 27.79 | 54.84         | -27.05        | Average |
| 2  | 0.172  | 9.80   | 28.37         | 38.17 | 64.84         | -26.67        | QP      |
| 3  | 0.207  | 9.80   | 15.28         | 25.08 | 53.33         | -28.25        | Average |
| 4  | 0.207  | 9.80   | 24.51         | 34.31 | 63.33         | -29.02        | QP      |
| 5  | 0.463  | 9.80   | 18.47         | 28.27 | 46.64         | -18.37        | Average |
| 6  | 0.463  | 9.80   | 25.26         | 35.06 | 56.64         | -21.58        | QP      |
| 7  | 0.546  | 9.81   | 23.01         | 32.82 | 46.00         | -13.18        | Average |
| 8  | 0.546  | 9.81   | 30.60         | 40.41 | 56.00         | -15.59        | QP      |
| 9  | 4.326  | 9.84   | 14.10         | 23.94 | 46.00         | -22.06        | Average |
| 10 | 4.326  | 9.84   | 21.64         | 31.48 | 56.00         | -24.52        | QP      |
| 11 | 18.244 | 9.98   | 27.64         | 37.62 | 50.00         | -12.38        | Average |
| 12 | 18.244 | 9.98   | 38.24         | 48.22 | 60.00         | -11.78        | QP      |



Site : Shielding Room

Condition: Neutral

Job No. : SZ1220620-27490E-00

Power : AC : AC 120V 60Hz Adapter : F06US0500100A

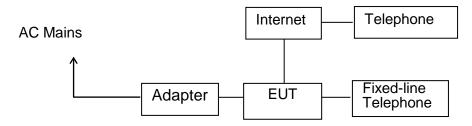
|    |        |        | Read  |       | Limit | Over   |         |
|----|--------|--------|-------|-------|-------|--------|---------|
|    | Freq   | Factor | Level | Level | Line  | Limit  | Remark  |
|    |        |        |       |       |       |        |         |
|    | MHz    | dB     | dBuV  | dBuV  | dBu∨  | dB     |         |
| 1  | 0.164  | 9.80   | 18.19 | 27.99 | 55.27 | -27.28 | Average |
| 2  | 0.164  | 9.80   | 27.93 | 37.73 | 65.27 | -27.54 | QP      |
| 3  | 0.295  | 9.80   | 18.51 | 28.31 | 50.38 | -22.07 | Average |
| 4  | 0.295  | 9.80   | 22.26 | 32.06 | 60.38 | -28.32 | QP      |
| 5  | 0.449  | 9.80   | 22.18 | 31.98 | 46.89 | -14.91 | Average |
| 6  | 0.449  | 9.80   | 28.44 | 38.24 | 56.89 | -18.65 | QP      |
| 7  | 0.542  | 9.81   | 27.52 | 37.33 | 46.00 | -8.67  | Average |
| 8  | 0.542  | 9.81   | 33.14 | 42.95 | 56.00 | -13.05 | QP      |
| 9  | 2.608  | 9.83   | 17.19 | 27.02 | 46.00 | -18.98 | Average |
| 10 | 2.608  | 9.83   | 24.20 | 34.03 | 56.00 | -21.97 | QP      |
| 11 | 10.919 | 10.01  | 25.13 | 35.14 | 50.00 | -14.86 | Average |
| 12 | 10.919 | 10.01  | 32.06 | 42.07 | 60.00 | -17.93 | QP      |

# 5. RADIATED EMISSION MEASUREMENT

# 5.1.Block Diagram of Test Setup

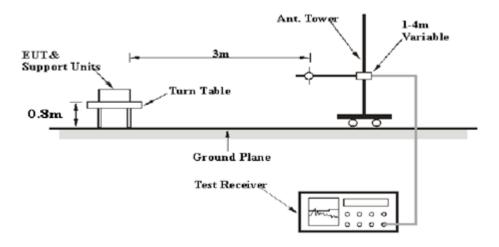
5.1.1.Block diagram of connection between the EUT and simulators

Report No.: SZ1220620-27490E-EM-01

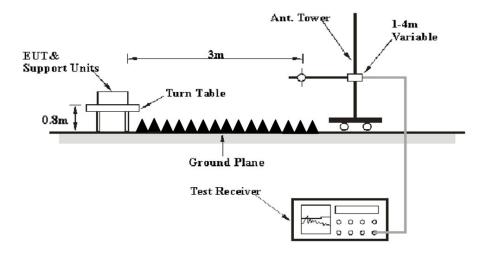


## 5.1.2.Test System Setup

#### **Below 1GHz:**



#### **Above 1GHz:**



## 5.2.Radiated Emission Limit (Class B)

All emissions from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Report No.: SZ1220620-27490E-EM-01

| Frequency | Distance | Field Streng | ths QP Limit |
|-----------|----------|--------------|--------------|
| MHz       | Meters   | μV/m         | dB(μV/m)     |
| 30-88     | 3        | 100          | 40.0         |
| 88-216    | 3        | 150          | 43.5         |
| 216-960   | 3        | 200          | 46.0         |
| Above 960 | 3        | 500          | 54.0         |

#### Remark:

- (1) Emission level dB( $\mu$ V) = 20 log Emission level  $\mu$ V/m.
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument antenna and the closest point of any part of the device or system.

| Frequency | Distance | Field Strengths Limit |          |
|-----------|----------|-----------------------|----------|
| MHz       | Meters   | Peak                  | AV       |
|           |          | dB(μV/m)              | dB(μV/m) |
| 1000-2000 | 3        | 74                    | 54       |

#### 5.3.Manufacturer

The following equipment are installed on Radiated Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

# 5.4. Operating Condition of EUT

- 5.4.1. Setup the EUT and simulator as shown as Section 5.1.
- 5.4.2. Turn on the power of all equipment.
- 5.4.3.Let the EUT work in test mode and measure it.

#### 5.5.Test Procedure

The EUT and its simulators are placed on a turntable. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated blog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

Report No.: SZ1220620-27490E-EM-01

The bandwidth of the test equipment is set at 9kHz in 9kHz-30MHz, 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 30MHz to 2GHz is investigated.

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measure-<br>ment range (MHz)  |
|--|--|
| Below 1.705  | 30. 1000. 2000. 5000. 5th harmonic of the highest frequency or 40 GHz, whichever is lower. |

Over Limit (dB) = Level(dBμv/m) - Limit (dBμv/m) QP = Quasi-peak Reading

The "Over Limit" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

#### 5.6. Radiated Emission Measurement Result

#### PASS.

The frequency range from 30MHz to 2GHz is investigated.

The spectral diagrams are attached as below.

Over Limit = Level ( $dB\mu V$ ) - Limit ( $dB\mu V$ )

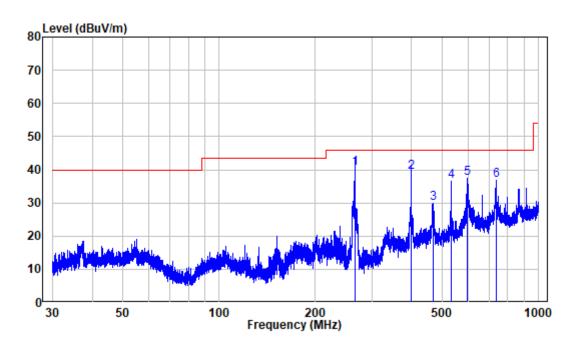
## **Below 1G**

| Job No.:       | SZ1220620-27490E-00      | Power:             | 120V 60Hz          |
|----------------|--------------------------|--------------------|--------------------|
| EUT No.:       | SZ1220620-27490E-EM-S1   | Test By:           | Level Li           |
| EUT:           | Analog Telephone Adapter | Test item:         | Radiation Emission |
| Model:         | HT801                    | Temp.(℃)/Hum.(%):: | 25° C 62%RH        |
| Test standard: | FCC Part 15B             | Date:              | 2022.7. 15         |

Report No.: SZ1220620-27490E-EM-01

# Adapter 1:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

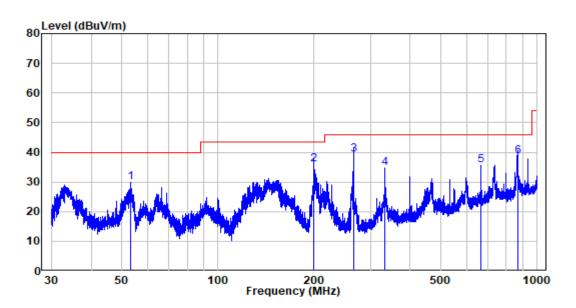
Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : DSA-6PFG-05 FUS 050100

|   | Freq    | Factor |       |        | Limit<br>Line |        | Remark |
|---|---------|--------|-------|--------|---------------|--------|--------|
|   |         |        |       |        |               |        |        |
|   | MHZ     | dB/m   | aBuv  | aBuv/m | aBuv/m        | ав     |        |
| 1 | 266.726 | -10.37 | 50.84 | 40.47  | 46.00         | -5.53  | QP     |
| 2 | 400.081 | -6.73  | 45.99 | 39.26  | 46.00         | -6.74  | QP     |
| 3 | 466.621 | -5.51  | 35.40 | 29.89  | 46.00         | -16.11 | Peak   |
| 4 | 533.364 | -4.47  | 40.86 | 36.39  | 46.00         | -9.61  | Peak   |
| 5 | 597.747 | -2.55  | 39.84 | 37.29  | 46.00         | -8.71  | Peak   |
| 6 | 735.780 | -0.68  | 37.37 | 36.69  | 46.00         | -9.31  | Peak   |

## Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

Test Mode: Working

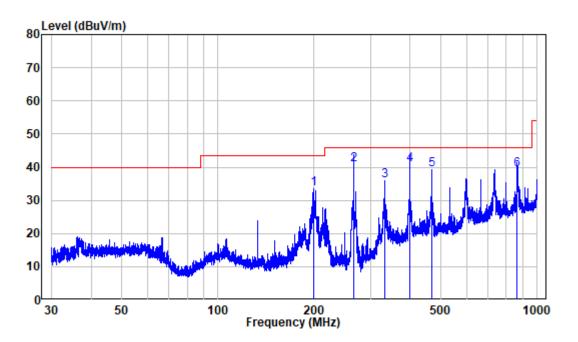
Adapter : DSA-6PFG-05 FUS 050100

|   | Freq    | Factor |       |        | Limit<br>Line |        | Remark |
|---|---------|--------|-------|--------|---------------|--------|--------|
|   | MHz     | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        |
| 1 | 53.341  | -10.23 | 40.11 | 29.88  | 40.00         | -10.12 | Peak   |
| 2 | 200.073 | -11.41 | 47.36 | 35.95  | 43.50         | -7.55  | QP     |
| 3 | 266.726 | -10.37 | 49.66 | 39.29  | 46.00         | -6.71  | QP     |
| 4 | 333.394 | -7.74  | 42.39 | 34.65  | 46.00         | -11.35 | Peak   |
| 5 | 666.680 | -1.66  | 37.26 | 35.60  | 46.00         | -10.40 | Peak   |
| 6 | 867.228 | 0.80   | 37.81 | 38.61  | 46.00         | -7.39  | QP     |

#### Report No.: SZ1220620-27490E-EM-01

# Adapter 2:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

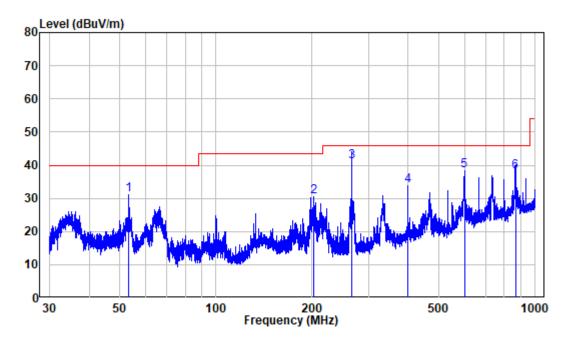
Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : GQ06-050X00-ZU

|   |         |        | Read  |        | Limit  | 0ver   |        |
|---|---------|--------|-------|--------|--------|--------|--------|
|   | Freq    | Factor | Level | Level  | Line   | Limit  | Remark |
|   |         |        |       |        | In     |        |        |
|   | MHZ     | dB/m   | dBuV  | dBuV/m | dBuV/m | ав     |        |
| 1 | 199.986 | -11.40 | 44.80 | 33.40  | 43.50  | -10.10 | Peak   |
| 2 | 266.726 | -10.37 | 51.05 | 40.68  | 46.00  | -5.32  | QP     |
| 3 | 333.394 | -7.74  | 43.80 | 36.06  | 46.00  | -9.94  | Peak   |
| 4 | 400.081 | -6.73  | 47.54 | 40.81  | 46.00  | -5.19  | QP     |
| 5 | 466.826 | -5.52  | 44.86 | 39.34  | 46.00  | -6.66  | Peak   |
| 6 | 865.329 | 0.66   | 38.66 | 39.32  | 46.00  | -6.68  | QP     |

## Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

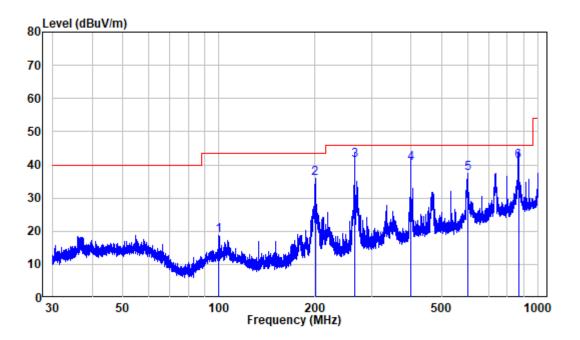
Test Mode: Working

Adapter : GQ06-050X00-ZU

|   | Frea    | Factor |       |        | Limit<br>Line |        | Remark |
|---|---------|--------|-------|--------|---------------|--------|--------|
|   |         |        |       |        |               |        |        |
|   | MHz     | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        |
| 1 | 53.318  | -10.22 | 41.17 | 30.95  | 40.00         | -9.05  | Peak   |
| 2 | 202.189 | -11.59 | 42.08 | 30.49  | 43.50         | -13.01 | Peak   |
| 3 | 266.726 | -10.37 | 51.38 | 41.01  | 46.00         | -4.99  | QP     |
| 4 | 400.081 | -6.73  | 40.40 | 33.67  | 46.00         | -12.33 | Peak   |
| 5 | 599.847 | -2.44  | 40.92 | 38.48  | 46.00         | -7.52  | Peak   |
| 6 | 866.848 | 0.77   | 37.25 | 38.02  | 46.00         | -7.98  | QP     |

# Adapter 3:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

Job No. : SZ1220620-27490E-00

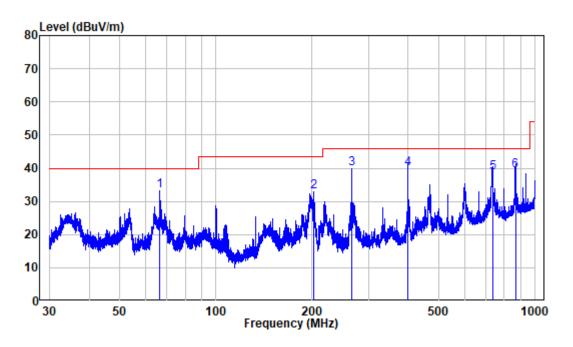
Test Mode: Working

Adapter : F06US0500100A

|   | Freq    | Factor |       |        | Limit<br>Line |        | Remark |
|---|---------|--------|-------|--------|---------------|--------|--------|
| - | MHz     | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        |
| 1 | 100.009 | -11.80 | 30.64 | 18.84  | 43.50         | -24.66 | Peak   |
| 2 | 200.161 | -11.42 | 47.32 | 35.90  | 43.50         | -7.60  | Peak   |
| 3 | 266.726 | -10.37 | 51.80 | 41.43  | 46.00         | -4.57  | QP     |
| 4 | 400.081 | -6.73  | 47.06 | 40.33  | 46.00         | -5.67  | QP     |
| 5 | 600.636 | -2.41  | 39.83 | 37.42  | 46.00         | -8.58  | Peak   |
| 6 | 866.848 | 0.77   | 40.38 | 41.15  | 46.00         | -4.85  | QP     |

#### Report No.: SZ1220620-27490E-EM-01

## Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : F06US0500100A

|   |         |        | Read  |        | Limit  | 0ver   |        |
|---|---------|--------|-------|--------|--------|--------|--------|
|   | Freq    | Factor | Level | Level  | Line   | Limit  | Remark |
| _ |         |        |       |        |        |        |        |
|   | MHz     | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 66.616  | -13.18 | 46.29 | 33.11  | 40.00  | -6.89  | Peak   |
| 2 | 202.366 | -11.61 | 44.50 | 32.89  | 43.50  | -10.61 | Peak   |
| 3 | 266.726 | -10.37 | 50.08 | 39.71  | 46.00  | -6.29  | Peak   |
| 4 | 400.081 | -6.73  | 46.46 | 39.73  | 46.00  | -6.27  | QP     |
| 5 | 735.458 | -0.67  | 39.27 | 38.60  | 46.00  | -7.40  | QP     |
| 6 | 866.848 | 0.77   | 38.62 | 39.39  | 46.00  | -6.61  | QP     |

## **Above 1G**

| Job No.: | SZ1220620-27490E-00      | Power:     | 120V 60Hz                 |
|----------|--------------------------|------------|---------------------------|
| EUT No.: | SZ1220620-27490E-EM-S1   | Test By:   | Level Li                  |
| EUT:     | Analog Telephone Adapter | Test item: | <b>Radiation Emission</b> |

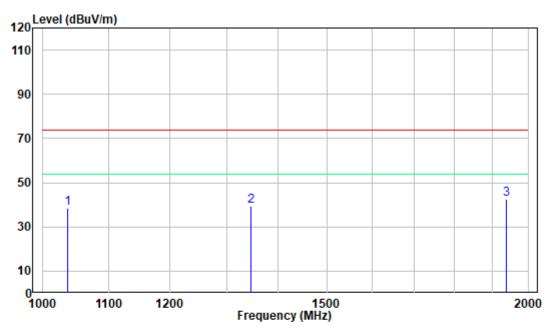
Report No.: SZ1220620-27490E-EM-01

Model: HT801 Temp.(°C)/Hum.(%): 24° C 61%RH

Test standard: FCC PART 15B Date: 2022.6. 30

## Adapter 1:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

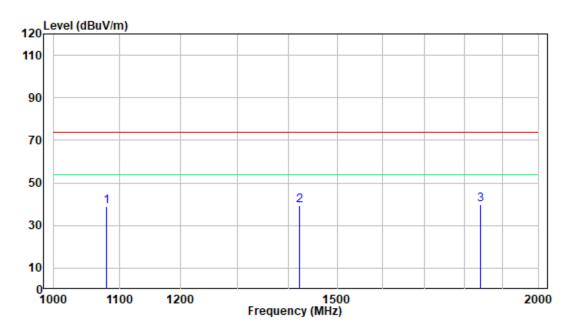
Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : DSA-6PFG-05 FUS 050100

|   | Freq     | Factor |       |        | Limit<br>Line |        | Remark |   |
|---|----------|--------|-------|--------|---------------|--------|--------|---|
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        | _ |
| 1 | 1037.250 | -10.49 | 49.17 | 38.68  | 74.00         | -35.32 | Peak   |   |
| 2 | 1346.750 | -10.03 | 49.21 | 39.18  | 74.00         | -34.82 | Peak   |   |
| 3 | 1936.250 | -7.73  | 50.32 | 42.59  | 74.00         | -31.41 | Peak   |   |

## **Vertical**



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

Test Mode: Working

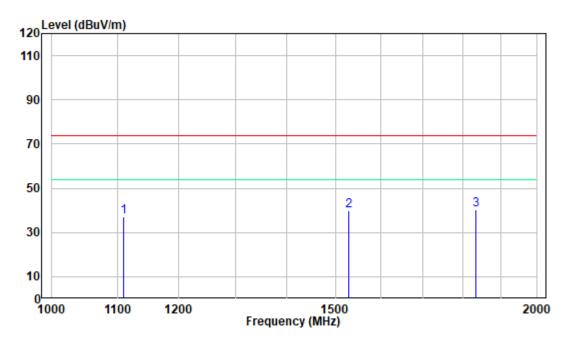
Adapter : DSA-6PFG-05 FUS 050100

|   |          |        | Read  |        | Limit  | Over   |        |
|---|----------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Factor | Level | Level  | Line   | Limit  | Remark |
|   |          |        |       |        |        |        |        |
|   |          |        |       | 15     | 15.11  |        |        |
|   | MHZ      | dB/m   | dBuV  | dBuV/m | dBuV/m | đВ     |        |
| 1 | 1078.625 | -10.41 | 49.36 | 38.95  | 74.00  | -35.05 | Peak   |
| 2 | 1420.375 | -9.87  | 49.20 | 39.33  | 74.00  | -34.67 | Peak   |
| 3 | 1840.125 | -8.45  | 48.47 | 40.02  | 74.00  | -33.98 | Peak   |

#### Report No.: SZ1220620-27490E-EM-01

# Adapter 2:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

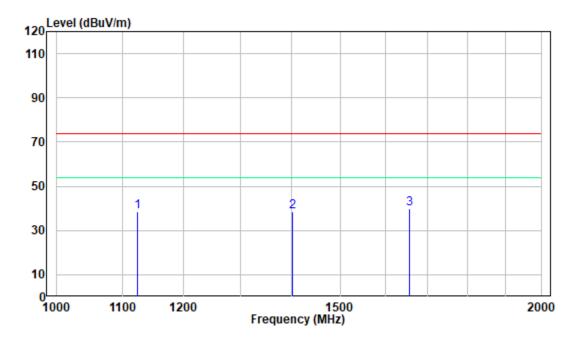
Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : GQ06-050100-ZU

|   | Freq     | Factor |       | Level  |        | Over<br>Limit | Remark |
|---|----------|--------|-------|--------|--------|---------------|--------|
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB            |        |
| 1 | 1109.125 | -10.35 | 47.57 | 37.22  | 74.00  | -36.78        | Peak   |
| 2 | 1527.750 | -9.36  | 49.10 | 39.74  | 74.00  | -34.26        | Peak   |
| 3 | 1833.250 | -8.51  | 48.89 | 40.38  | 74.00  | -33.62        | Peak   |

## Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

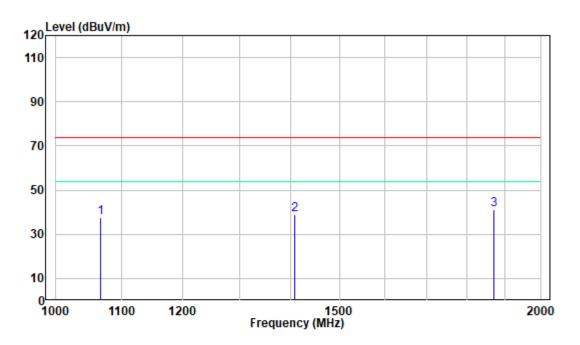
Test Mode: Working

Adapter : GQ06-050100-ZU

|   |          |        | Read  |        | Limit  | 0ver   |        |
|---|----------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Factor | Level | Level  | Line   | Limit  | Remark |
|   |          |        |       |        |        |        |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
|   |          | -      |       |        | -      |        |        |
| 1 | 1123.000 | -10.35 | 48.77 | 38.42  | 74.00  | -35.58 | Peak   |
| 2 | 1401.625 | -9.96  | 48.67 | 38.71  | 74.00  | -35.29 | Peak   |
| 3 | 1656.625 | -9.06  | 48.96 | 39.90  | 74.00  | -34.10 | Peak   |

# Adapter 3:

## Horizontal



Site : chamber

Condition: 3m HORIZONTAL

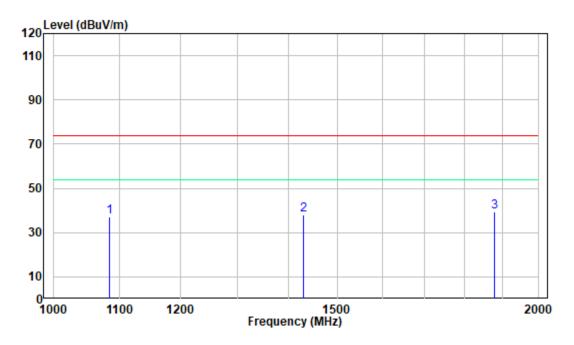
Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : F06U50500100A

|   | Freq     | Factor |       |        | Limit<br>Line |        | Remark |
|---|----------|--------|-------|--------|---------------|--------|--------|
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        |
| 1 | 1067.125 | -10.42 | 48.09 | 37.67  | 74.00         | -36.33 | Peak   |
| 2 | 1407.250 | -9.93  | 48.83 | 38.90  | 74.00         | -35.10 | Peak   |
| 3 | 1869.500 | -8.23  | 49.59 | 41.36  | 74.00         | -32.64 | Peak   |

#### Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZ1220620-27490E-00

Test Mode: Working

Adapter : F06U50500100A

|   | Freq     | Factor |       |        | Limit<br>Line |        | Remark |
|---|----------|--------|-------|--------|---------------|--------|--------|
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m        | dB     |        |
| 1 | 1083.000 | -10.41 | 47.49 | 37.08  | 74.00         | -36.92 | Peak   |
| 2 | 1430.000 | -9.83  | 47.85 | 38.02  | 74.00         | -35.98 | Peak   |
| 3 | 1877.750 | -8.19  | 47.51 | 39.32  | 74.00         | -34.68 | Peak   |

Note 1: Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

The other spurious emission which is in the noise floor level was not recorded.

Note 2: For above 1GHz testing, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

----- THE END OF TEST REPORT ------