

# TEST REPORT

**Report No.**..... : **KS2203S1087E**  
**FCC ID**..... : **2A6Q4-HFY403-117S**  
**Applicant**..... : Shenzhen Huafangyuan Electronics Co., Ltd.  
**Address**..... : 2F, No. 2, Fukang Road, Building 36, Fumin Industrial Zone, Pinghu Town, Shenzhen, China  
**Manufacturer**..... : Shenzhen Huafangyuan Electronics Co., Ltd.  
**Address**..... : 2F, No. 2, Fukang Road, Building 36, Fumin Industrial Zone, Pinghu Town, Shenzhen, China  
**Product Name**..... : **Wireless Remote Control**  
**Trade Mark**..... : HFY  
**Model/Type reference**..... : HFY403-117S  
**Listed Model(s)**..... : HFY-TX85, HFY-614, HFY-520, HFY-TX25, HFY-TX28, HFY-556  
**Standard**..... : **FCC CFR Title 47 Part 15 Subpart C Section 15.231**  
**Date of Receipt**..... : Mar. 28, 2022  
**Date of Test Date**..... : Mar. 28, 2022~June 13, 2022  
**Date of issue**..... : June 13, 2022  
**Test result**..... : **Pass**

**Prepared by:** Sky Dong  
 ( Printed name+ signature)



**Approved by:** Neil Wan  
 (Printed name+signature)



**Testing Laboratory Name**..... : **KSIGN(Guangdong) Testing Co., Ltd.**  
**Address**..... : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, People's Republic of China

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## 1. TEST SUMMARY

### 1.1. Test Standards

The tests were performed according to following standards:

**FCC Rules Part 15.231:** Periodic operation in the band 40.66–40.70 MHz and above 70 MHz.

**ANSI C63.10-2013:** American National Standard for Testing Unlicensed Wireless Devices.

### 1.2. Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | June 13,2022  | Original    |

### 1.3. Test Description

| FCC Rules Part 15.231       |                     |        |               |
|-----------------------------|---------------------|--------|---------------|
| Test Item                   | Standard Section    | Result | Test Engineer |
|                             | FCC                 |        |               |
| Antenna requirement         | 15.203              | Pass   | Rory Huang    |
| Conducted Emissions         | 15.207              | N/A    | N/A           |
| Radiated Spurious Emissions | 15.209(a)/15.231(b) | Pass   | Rory Huang    |
| Deactivation Time           | 15.231(a)(1)        | Pass   | Rory Huang    |
| Duty Cycle                  | 15.231              | N/A    | Rory Huang    |
| Occupied Bandwidth          | 15.231(c)           | Pass   | Rory Huang    |

Note: 1. The measurement uncertainty is not included in the test result.

2.N/A: means this test item is not applicable

3.The product is dry battery power supply.

## 1.4. Test Facility

### Address of the report laboratory

#### **KSIGN(Guangdong) Testing Co., Ltd.**

West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, People's Republic of China

### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### **CNAS-Lab Code: L13261**

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

#### **A2LA-Lab Cert. No.: 5457.01**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### **IC Registration No.: CN0096**

The 3m alternate test site of KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: CN0096

#### **FCC-Registration No.: 860752**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

## 1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the KSIGN(Guangdong) Testing Co., Ltd. system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Below is the best measurement capability for KSIGN(Guangdong) Testing Co., Ltd.

| Test Items                              | Measurement Uncertainty | Notes |
|-----------------------------------------|-------------------------|-------|
| Transmitter power conducted             | 0.42 dB                 | (1)   |
| Transmitter power Radiated              | 2.14 dB                 | (1)   |
| Conducted spurious emissions 9kHz~40GHz | 1.60 dB                 | (1)   |
| Radiated spurious emissions 9kHz~40GHz  | 2.20 dB                 | (1)   |
| Conducted Emissions 9kHz~30MHz          | 3.20 dB                 | (1)   |
| Radiated Emissions 30~1000MHz           | 4.70 dB                 | (1)   |
| Radiated Emissions 1~18GHz              | 5.00 dB                 | (1)   |
| Radiated Emissions 18~40GHz             | 5.54 dB                 | (1)   |
| Occupied Bandwidth                      | 2.80 dB                 | (1)   |

**Note (1):** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=1.96$ .

## 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

|                    |             |
|--------------------|-------------|
| Temperature:       | 15~35°C     |
| Relative Humidity: | 30~60 %     |
| Air Pressure:      | 950~1050mba |

## 2. GENERAL INFORMATION

### 2.1. Client Information

|               |                                                                                          |
|---------------|------------------------------------------------------------------------------------------|
| Applicant:    | Shenzhen Huafangyuan Electronics Co., Ltd.                                               |
| Address:      | 2F, No. 2, Fukang Road, Building 36, Fumin Industrial Zone, Pinghu Town, Shenzhen, China |
| Manufacturer: | Shenzhen Huafangyuan Electronics Co., Ltd.                                               |
| Address:      | 2F, No. 2, Fukang Road, Building 36, Fumin Industrial Zone, Pinghu Town, Shenzhen, China |

### 2.2. General Description of EUT

|                         |                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------|
| Test Sample Number:     | 1-1-1(Normal Sample),1-1-2(Engineering Sample )                                      |
| Product Name:           | Wireless Remote Control                                                              |
| Model/Type reference:   | HFY403-117S                                                                          |
| Trademark:              | HFY                                                                                  |
| Listed models:          | HFY-TX85,HFY-614,HFY-520,HFY-TX25,HFY-TX28,HFY-556                                   |
| Model Difference:       | All models have the same circuit and RF module · except the appearance is different. |
| Power supply:           | N/A                                                                                  |
| Power supply(Battery):  | DC 3V                                                                                |
| Hardware version:       | V1.0                                                                                 |
| Software version:       | V1.0                                                                                 |
| <b>RF Specification</b> |                                                                                      |
| Operation frequency:    | 434.0325MHz                                                                          |
| Modulation Type:        | ASK                                                                                  |
| Channel number:         | 1                                                                                    |
| Antenna type:           | PCB antenna                                                                          |
| Antenna gain:           | 0 dBi                                                                                |

### 2.3. Test Mode

The EUT was operated at continuous transmitting mode that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

| Test Mode | Description | Remark |
|-----------|-------------|--------|
| 1         | TX          | DC 3V  |

## 2.4. Measurement Instruments List

| Tonscend JS0806-2 Test system |                                     |              |           |            |            |
|-------------------------------|-------------------------------------|--------------|-----------|------------|------------|
| Item                          | Test Equipment                      | Manufacturer | Model No. | Serial No. | Cal. Until |
| 1                             | Spectrum Analyzer                   | R&S          | FSV40-N   | 101798     | 03/04/2023 |
| 2                             | Vector Signal Generator             | Agilent      | N5182A    | MY50142520 | 03/04/2023 |
| 3                             | Analog Signal Generator             | HP           | 83752A    | 3344A00337 | 03/04/2023 |
| 4                             | Power Sensor                        | Agilent      | E9304A    | MY50390009 | 03/04/2023 |
| 5                             | Power Sensor                        | Agilent      | E9300A    | MY41498315 | 03/04/2023 |
| 6                             | Wideband Radio Communication Tester | R&S          | CMW500    | 157282     | 03/04/2023 |
| 7                             | Climate Chamber                     | Angul        | AGNH80L   | 1903042120 | 03/04/2023 |
| 8                             | Dual Output DC Power Supply         | Agilent      | E3646A    | MY40009992 | 03/04/2023 |
| 9                             | RF Control Unit                     | Tonscend     | JS0806-2  | /          | 03/04/2023 |

| Transmitter spurious emissions & Receiver spurious emissions |                                            |                     |              |            |            |
|--------------------------------------------------------------|--------------------------------------------|---------------------|--------------|------------|------------|
| Item                                                         | Test Equipment                             | Manufacturer        | Model No.    | Serial No. | Cal. Until |
| 1                                                            | EMI Test Receiver                          | R&S                 | ESR          | 102525     | 03/04/2023 |
| 2                                                            | High Pass Filter                           | Chengdu E-Microwave | OHF-3-18-S   | 0E01901038 | 03/04/2023 |
| 3                                                            | High Pass Filter                           | Chengdu E-Microwave | OHF-6.5-18-S | 0E01901039 | 03/04/2023 |
| 4                                                            | Spectrum Analyzer                          | HP                  | 8593E        | 3831U02087 | 03/04/2023 |
| 5                                                            | Ultra-Broadband logarithmic period Antenna | Schwarzbeck         | VULB 9163    | 01230      | 12/04/2023 |
| 6                                                            | Loop Antenna                               | Beijin ZHINAN       | ZN30900C     | 18050      | 03/04/2023 |
| 7                                                            | Spectrum Analyzer                          | R&S                 | FSV40-N      | 101798     | 03/04/2023 |
| 8                                                            | Horn Antenna                               | Schwarzbeck         | BBHA 9120 D  | 2023       | 03/29/2023 |
| 9                                                            | Pre-Amplifier                              | Schwarzbeck         | BBV 9745     | 9745#129   | 03/04/2023 |
| 10                                                           | Pre-Amplifier                              | EMCI                | EMC051835SE  | 980662     | 03/04/2023 |

| Item | Test Equipment    | Manufacturer | Model No. | Serial No.   | Cal. Until |
|------|-------------------|--------------|-----------|--------------|------------|
| 1    | LISN              | R&S          | ENV432    | 1326.6105.02 | 03/04/2023 |
| 2    | EMI Test Receiver | R&S          | ESR       | 102524       | 03/04/2023 |
| 3    | Manual RF Switch  | JS TOYO      | /         | MSW-01/002   | 03/04/2023 |

Note:

1)The Cal. Interval was one year.

2)The cable loss has calculated in test result which connection between each test instruments.

## 2.5. Test Software

| Software name                           | Model    | Version       |
|-----------------------------------------|----------|---------------|
| Conducted emission Measurement Software | EZ-EMC   | EMC-Con 3A1.1 |
| Radiated emission Measurement Software  | EZ-EMC   | FA-03A.2.RE   |
| Bluetooth and WIFI Test System          | JS1120-3 | 2.5.77.0418   |

### 3. TEST ITEM AND RESULTS

#### 3.1. Antenna requirement

##### Requirement

##### **FCC CFR Title 47 Part 15 Subpart C Section 15.203:**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

##### Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

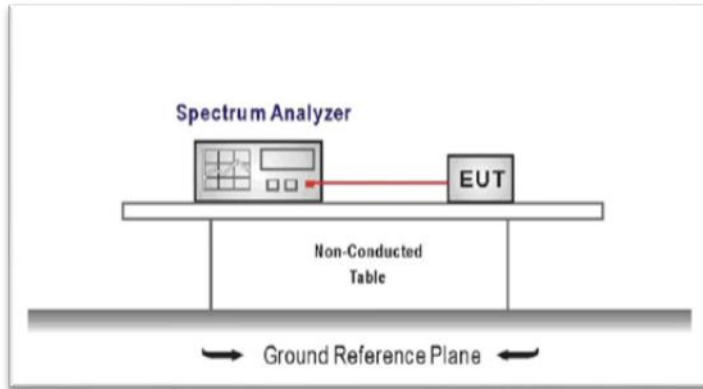
Note: The antenna is permanently fixed to the EUT

## 3.2. Occupied Bandwidth

### Limit

The bandwidth of the emission shall be no wider than 0.25% of the center frequency

### Test Configuration



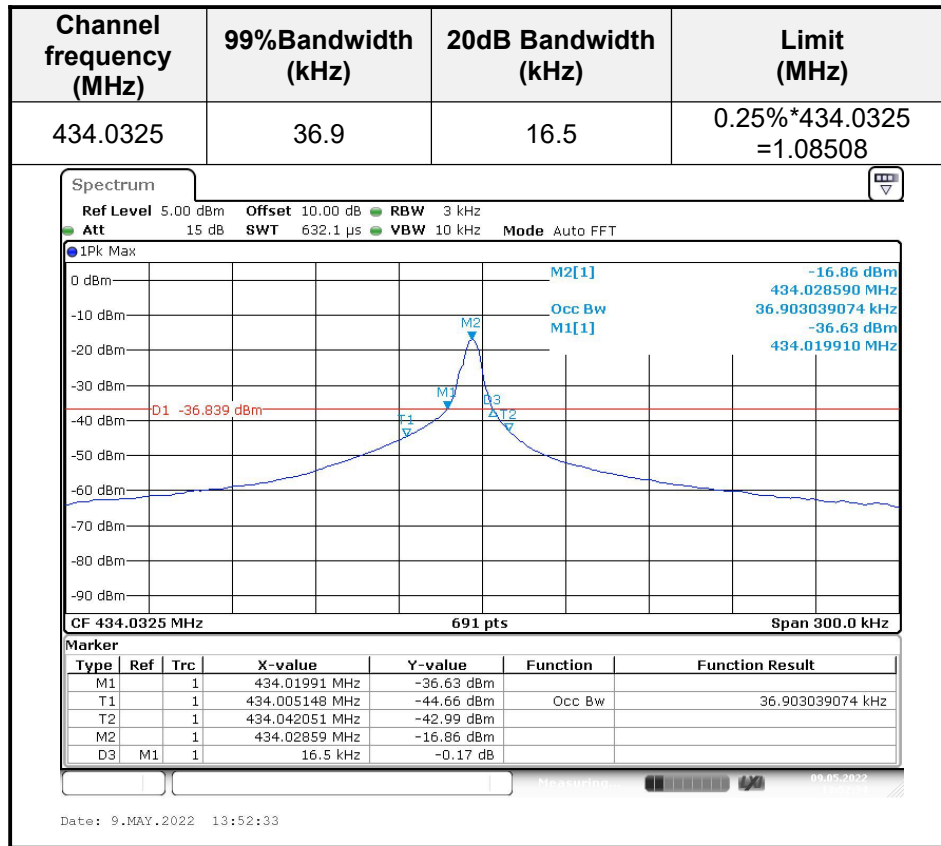
### Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:  
 Span = approximately 2 to 3 times the 99% bandwidth, centered on a operation channel  
 RBW  $\geq$  1% of the 20 dB bandwidth, VBW  $\geq$  RBW  
 Sweep = auto, Detector function = peak, Trace = max hold
4. Measure and record the results in the test report.

### Test Mode

Please refer to the clause 2.3.

## Test Results



TRF No. FCC Part 15.231\_R1

Add : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

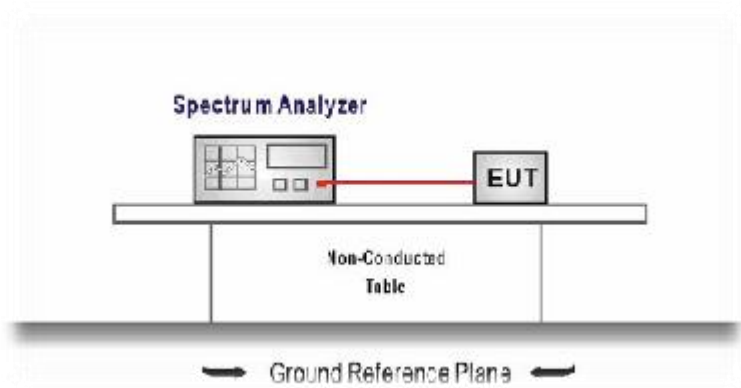
Tel : +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail : info@gdkesign.cn Web: www.gdkesign.com

### 3.3. Deactivation Time

#### Limit

A manually operated transmitter shall employ a switch that will auto-matically deactivate the transmitter within not more than 5 seconds of being released.

#### Test Configuration



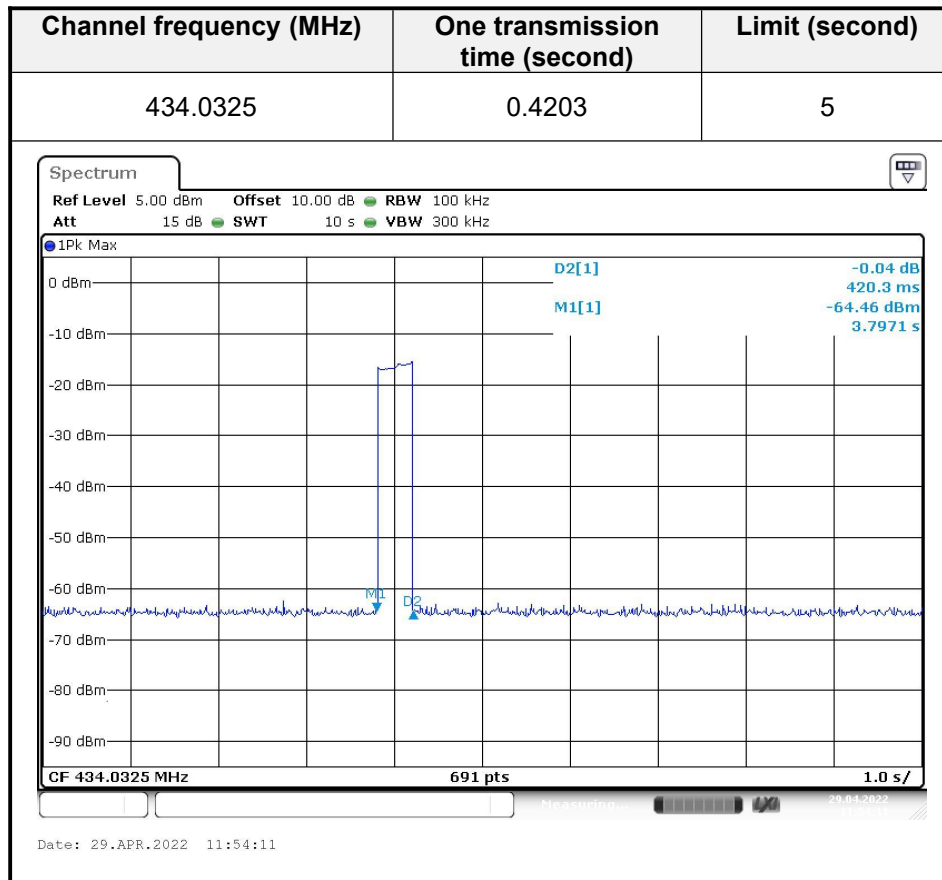
#### Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:  
Frequency=Center carrier frequency  
RBW=100KHz, VBW=300KHz, Span= 0,  
Sweep time= 10 second, Detector function = peak, Trace = single
4. Measure and record the results in the test report.

#### Test Mode

Please refer to the clause 2.3.

## Test Results



TRF No. FCC Part 15.231\_R1

Add : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

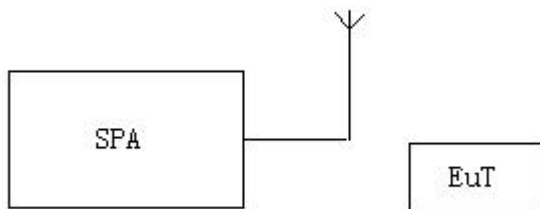
Tel : +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail : info@gdkesign.cn Web: www.gdkesign.com

### 3.4. Duty Cycle Correction factor

#### Test Procedure

1. Set the parameters of SPA as below:  
Centre frequency = Operation Frequency  
RBW=100KHz; VBW=300KHz  
Span: 0Hz  
Sweep time: more than two pulse trains or more than each type of pulse occupancy time
2. Set the EUT to transmit by manually operated. Use the “Delta mark” function of SPA to find the period time between two pulse trains and each type of pulse occupancy time.
3. Record the plots and Reported.

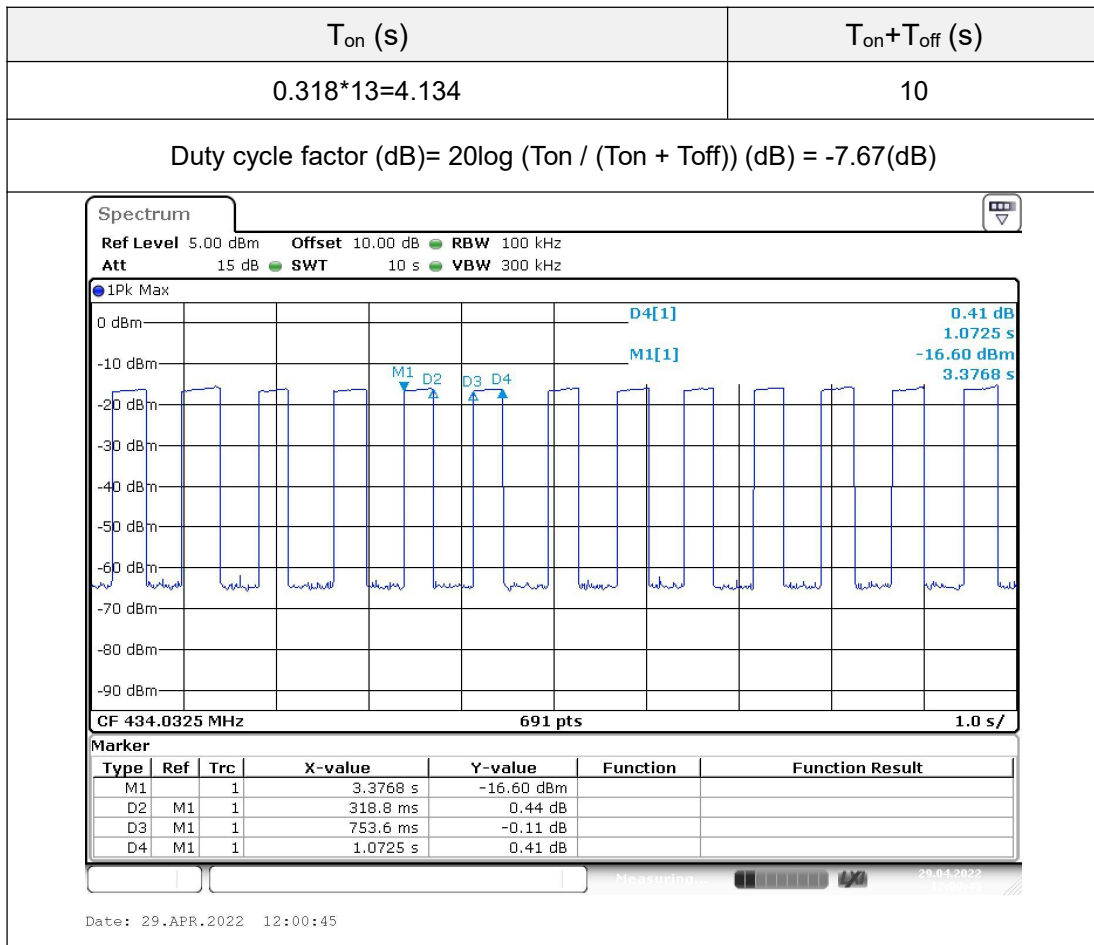
#### Test Configuration



#### Test Mode

Please refer to the clause 2.3.

## Test Results



### 3.5. Spurious Emission (radiated)

#### Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.209

Radiated Emission Limits (9 kHz~1000 MHz)

| Frequency (MHz) | Field Strength (microvolt/meter) | Measurement Distance (meters) |
|-----------------|----------------------------------|-------------------------------|
| 0.009~0.490     | $2400/F(\text{KHz})$             | 300                           |
| 0.490~1.705     | $24000/F(\text{KHz})$            | 30                            |
| 1.705~30.0      | 30                               | 30                            |
| 30~88           | 100                              | 3                             |
| 88~216          | 150                              | 3                             |
| 216~960         | 200                              | 3                             |
| Above 960       | 500                              | 3                             |

#### FCC CFR Title 47 Part 15 Subpart C Section 15.213(b)

The field strength of emissions from intentional radiators operated **average value** under this section shall not exceed the following

| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|-----------------------|--------------------------------------------------|------------------------------------------------|
| 260 - 470 MHz         | 3,750 to 12,500 **                               | 375 to 1,250 **                                |

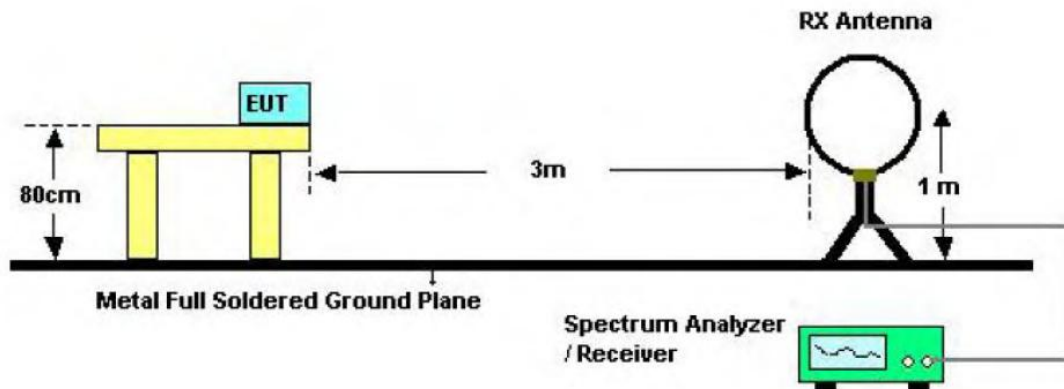
\*\* linear interpolations

F is 434.0325MHz

Field strength of fundamental:  $\mu\text{V/m}$  at 3 meters =  $41.6667(F) - 7083.3420$

Field strength of harmonics:  $\mu\text{V/m}$  at 3 meters =  $4.16667(F) - 708.3342$

#### Test Configuration

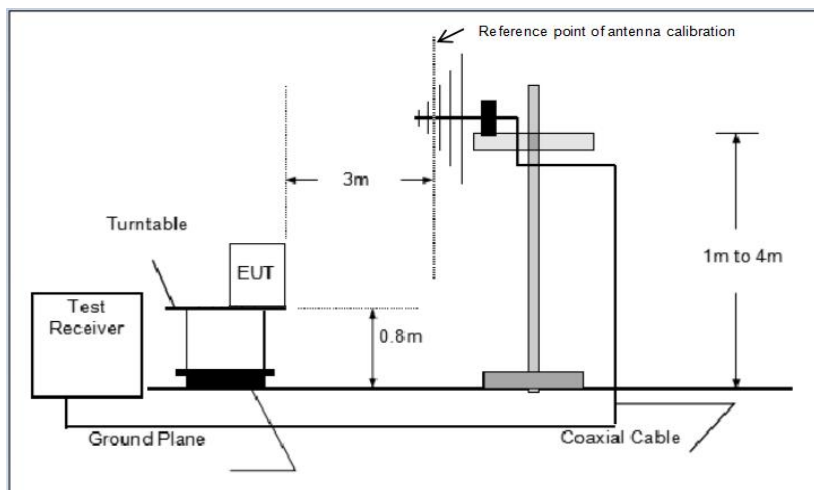


TRF No. FCC Part 15.231\_R1

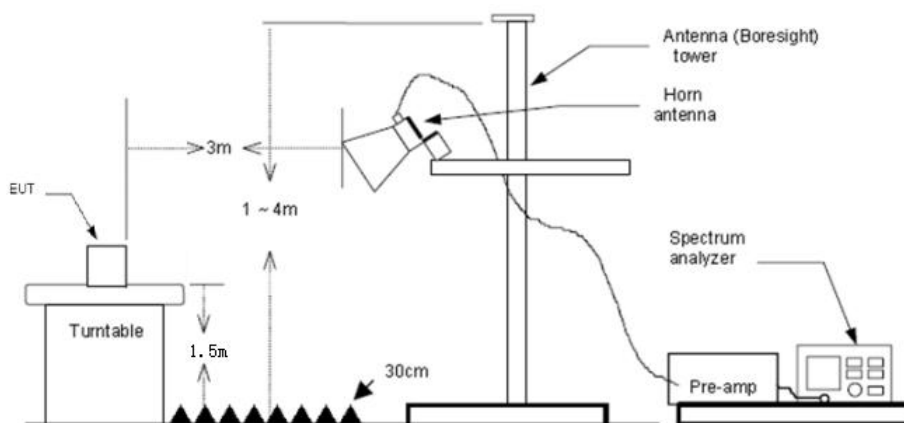
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### Below 30MHz Test Setup



### Below 1000MHz Test Setup



### Above 1GHz Test Setup

#### Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Below 1 GHz:  
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;  
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
  - (3) From 1 GHz to 10<sup>th</sup> harmonic:  
RBW=1MHz, VBW=3MHz Peak detector for Peak value.  
RBW=1MHz, VBW=10Hz Peak detector for Average value.

**Test Mode**

Please refer to the clause 2.3.

**Test Result****9 KHz~30 MHz , 30MHz-1GHz and 1GHz~5GHz**

From 9 KHz~30 MHz, 30MHz-1GHz and 1GHz~5GHz: Conclusion: PASS

Note:

- 1) Final level = Reading level + Correct Factor  
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

**RADIATED EMISSION BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.

### ■ 30MHz~ 1000MHz

#### Field Strength of Fundamental, Harmonic

| Frequency (MHz) | Peak Level (dBuV/m) | Peak Level Limit (dBμV/m) | Margin (dB) | Polarization |
|-----------------|---------------------|---------------------------|-------------|--------------|
| 434.0325        | 75.18               | 100.83                    | -25.65      | Vertical     |
| 868.0650        | 47.25               | 80.83                     | -33.58      | Vertical     |
| 434.0325        | 77.39               | 100.83                    | -23.44      | Horizontal   |
| 868.0650        | 56.18               | 80.83                     | -24.66      | Horizontal   |

| Frequency (MHz) | Peak Level (dBuV/m) | Duty cycle factor(dB) | AV Level (dBuV/m) | AV Level Limit (dBμV/m) | Margin (dB) | Polarization |
|-----------------|---------------------|-----------------------|-------------------|-------------------------|-------------|--------------|
| 434.0325        | 75.18               | -7.67                 | 67.51             | 80.83                   | -13.32      | Vertical     |
| 868.0650        | 48.61               | -7.67                 | 40.94             | 60.83                   | -19.89      | Vertical     |
| 434.0325        | 78.76               | -7.67                 | 71.09             | 80.83                   | -9.74       | Horizontal   |
| 868.0650        | 57.51               | -7.67                 | 49.84             | 60.83                   | -10.99      | Horizontal   |

Note:

Duty cycle factor =  $20\log(\text{Duty cycle})$ , Duty cycle =  $T_{on} / (T_{on} + T_{off})$

AV Level=Peak Level +Duty cycle factor

# 1GHz~ 5GHz

## Field Strength of Harmonic

| Test Channel    |                        |                     |                      | 433.90MHz           |             |              |            |
|-----------------|------------------------|---------------------|----------------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Final level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1301.70         | 55.607                 | -10.502             | 45.105               | 80.83               | -35.725     | Vertical     | Peak       |
| 1735.60         | 56.512                 | -10.113             | 46.399               | 80.83               | -34.431     | Vertical     |            |
| 2169.520        | 60.641                 | -10.262             | 50.379               | 80.83               | -30.451     | Vertical     |            |
| 2603.482        | 63.213                 | -10.537             | 52.676               | 80.83               | -28.154     | Vertical     |            |
| 3471.250        | 49.296                 | -9.113              | 40.183               | 80.83               | -40.647     | Vertical     |            |
| 1301.70         | 56.412                 | -10.578             | 45.834               | 80.83               | -34.996     | Horizontal   |            |
| 1735.60         | 56.493                 | -10.162             | 46.331               | 80.83               | -34.499     | Horizontal   |            |
| 2169.520        | 63.354                 | -10.292             | 53.062               | 80.83               | -27.768     | Horizontal   |            |
| 2603.482        | 67.468                 | -9.905              | 57.563               | 80.83               | -23.267     | Horizontal   |            |
| 3471.250        | 57.336                 | -9.073              | 48.263               | 80.83               | -32.567     | Horizontal   |            |

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

| Frequency (MHz) | Peak Level (dBuV/m) | Duty cycle Factor | AV Level (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) | Polarization |
|-----------------|---------------------|-------------------|-------------------|--------------------|-------------|--------------|
| 1301.70         | 45.105              | -7.67             | 37.435            | 60.83              | -23.395     | Vertical     |
| 1735.60         | 46.399              | -7.67             | 38.729            | 60.83              | -22.101     | Vertical     |
| 2169.520        | 50.379              | -7.67             | 42.709            | 60.83              | -18.121     | Vertical     |
| 2603.482        | 52.676              | -7.67             | 45.006            | 60.83              | -15.824     | Vertical     |
| 3471.250        | 40.183              | -7.67             | 32.513            | 60.83              | -28.317     | Vertical     |
| 1301.70         | 45.834              | -7.67             | 38.164            | 60.83              | -22.666     | Horizontal   |
| 1735.60         | 46.331              | -7.67             | 38.661            | 60.83              | -22.169     | Horizontal   |
| 2169.520        | 53.062              | -7.67             | 45.392            | 60.83              | -15.438     | Horizontal   |
| 2603.482        | 57.563              | -7.67             | 49.893            | 60.83              | -10.937     | Horizontal   |
| 3471.250        | 48.263              | -7.67             | 40.593            | 60.83              | -20.237     | Horizontal   |

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

## Spurious Emission

| Test Channel    |                        |                     |                      | 433.90MHz           |             |              |            |
|-----------------|------------------------|---------------------|----------------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Final level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1302.357        | 49.721                 | -10.569             | 39.152               | 74                  | -34.848     | Vertical     | Peak       |
| 1735.999        | 40.023                 | -10.913             | 29.110               | 74                  | -44.890     | Vertical     |            |
| 2169.611        | 49.358                 | -9.892              | 39.466               | 74                  | -34.534     | Vertical     |            |
| 1302.357        | 51.29                  | -10.452             | 40.838               | 74                  | -33.162     | Horizontal   |            |
| 1735.999        | 41.963                 | -10.687             | 31.276               | 74                  | -42.724     | Horizontal   |            |
| 2169.611        | 41.072                 | -9.801              | 31.271               | 74                  | -42.729     | Horizontal   |            |

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

| Frequency (MHz) | Peak Level (dBuV/m) | Duty cycle factor | AV Level (dBuV/m) | FCC Limit (dBuV/m) | Margin (dB) | Polarization |
|-----------------|---------------------|-------------------|-------------------|--------------------|-------------|--------------|
| 1302.357        | 39.152              | -7.67             | 31.482            | 54                 | -22.518     | Vertical     |
| 1735.999        | 29.110              | -7.67             | 21.440            | 54                 | -32.560     | Vertical     |
| 2169.611        | 39.466              | -7.67             | 31.796            | 54                 | -22.204     | Vertical     |
| 1302.357        | 40.838              | -7.67             | 33.168            | 54                 | -20.832     | Horizontal   |
| 1735.999        | 31.276              | -7.67             | 23.606            | 54                 | -30.394     | Horizontal   |
| 2169.611        | 31.271              | -7.67             | 23.601            | 54                 | -30.399     | Horizontal   |

Note:

Duty cycle factor =  $20\log(\text{Duty cycle})$ , Duty cycle =  $\text{Ton} / (\text{Ton} + \text{Toff})$ 

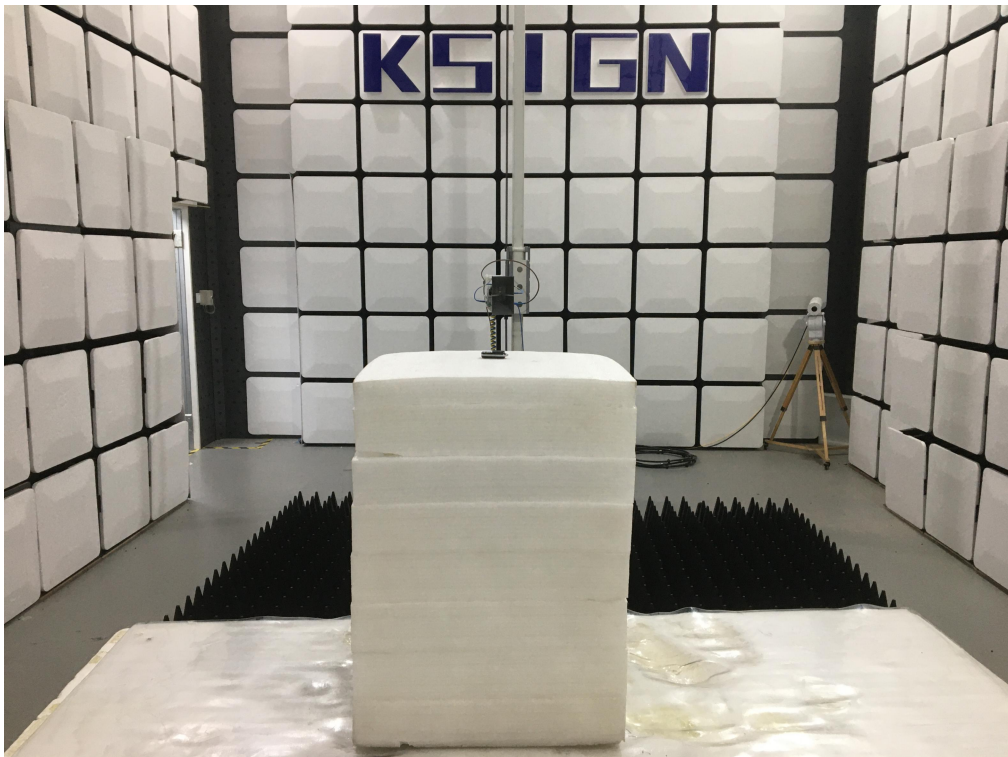
AV Level=Peak Level +Duty cycle factor

## 4.EUT TEST PHOTOS

Radiated Measurement (Below 1GHz)



Radiated Measurement (Above 1GHz)



## 5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photos and Internal Photos.

--THE END--