# MEASUREMENT REPORT
## FCC PART 15.231

| | |
|---|---|
| **FCC ID:** | 2ACFYHHRGB14 |
| **APPLICANT:** | ZHENGJI LIGHTING&ELECTRONICS TECHNOLOGY CO., LTD |
| **Application Type:** | Certification |
| **Product:** | LED RF Remote Control |
| **Model No.:** | HHRGB14, RFMIN17, RFMIN11, RFDIM, RFCON |
| **Brand Name:** | Zengge |
| **FCC Classification:** | FCC Part 15 Security/Remote Control Transmitter (DSC) |
| **FCC Rule Part(s):** | Part 15.231 |
| **Test Procedure(s):** | ANSI C63.10-2009 |
| **Test Date:** | May 21 ~ 26, 2014 |

Reviewed By : Robin Wu
( Robin Wu )

Approved By : Marlin Chen
( Marlin Chen )

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2009. Test results reported herein relate only to the item(s) tested.

# Revision History

| Report No. | Version | Description | Issue Date |
|---|---|---|---|
| 1405RSU01601 | Rev. 01 | Initial report | 05-27-2014 |
| 1405RSU01601 | Rev. 02 | Added the 9kHz ~ 30MHz Test Setup | 05-29-2014 |

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## §2.1033 General Information

| | |
|---|---|
| **Applicant:** | ZHENGJI LIGHTING&ELECTRONICS TECHNOLOGY CO., LTD |
| **Applicant Address:** | 3F, B Building, Second Laowei Industrial Area, Dalang Street, Longhua Baoan District, Shenzhen, Guangdong, China |
| **Manufacturer:** | ZHENGJI LIGHTING&ELECTRONICS TECHNOLOGY CO., LTD |
| **Manufacturer Address:** | 3F, B Building, Second Laowei Industrial Area, Dalang Street, Longhua Baoan District, Shenzhen, Guangdong, China |
| **Test Site:** | MRT Technology (Suzhou) Co., Ltd |
| **Test Site Address:** | D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China |
| **MRT Registration No.:** | 809388 |
| **FCC Rule Part(s):** | Part 15.231 |
| **Model No.** | HHRGB14, RFMIN17, RFMIN11, RFDIM, RFCON |
| **FCC ID:** | 2ACFYHHRGB14 |
| **Test Device Serial No.:** | N/A ☐ Production ☒ Pre-Production ☐ Engineering |
| **FCC Classification:** | FCC Part 15 Security/Remote Control Transmitter (DSC) |
| **Date(s) of Test:** | May 21 ~ 26, 2014 |
| **Test Report S/N:** | 1405RSU01601 |

# 1. INTRODUCTION

## 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

## 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.

# 2. PRODUCT INFORMATION

## 2.1. Equipment Description

| | |
|---|---|
| Product Name | LED RF Remote Control |
| Model No. | HHRGB14, RFMIN17, RFMIN11, RFDIM, RFCON |
| Trade Name | Zengge |
| Frequency Range | 433.92 MHz |
| Type of modulation | OOK |
| Antenna Type | Integral Antenna |
| Antenna Gain | 0dBi |

## 2.2. Test Standards

The following report is prepared on behalf of the Suzhou Sate Auto Electronic Co., Ltd. in accordance with FCC Part 15, Subpart C, and section 15.231, 15.203, 15.205 and 15.209 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart C, and section 15.231, 15.203, 15.205 and 15.209 of the Federal Communication Commissions rules.

**Maintenance of compliance** is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission/immunity, should be checked to ensure compliance has been maintained.

## 2.3. Test Methodology

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2009).

**Deviation from measurement procedure…….....None**

## 2.4. EUT Setup and 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 List** | | |
|---|---|---|
| Test Mode | Description | Remark |
| Mode 1 | Transmitting | With modulation |

| **Special Cable List and Details** | | | |
|---|---|---|---|
| Cable Description | Length (m) | Shielded / Unshielded | With / Without Ferrite |
| N/A | N/A | N/A | N/A |

| **Auxiliary Equipment List and Details** | | | |
|---|---|---|---|
| Description | Manufacturer | Model | Serial Number |
| N/A | N/A | N/A | N/A |

# 3. ANTENNA REQUIREMENTS

**Excerpt from §15.203 of the FCC Rules/Regulations:**

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section."

- The antenna of the LED RF Remote Control is **permanently attached.**
- There are no provisions for connection to an external antenna.

**Conclusion:**

The LED RF Remote Control **FCC ID: 2ACFYHHRGB14** unit complies with the requirement of §15.203.

# 4. TEST EQUIPMENT CALIBRATION DATA

Radiated Emission

| Instrument | Manufacturer | Type No. | Serial No. | Cali. Interval | Cal. Due. Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4447A | MY45300136 | 1 year | 2014/11/08 |
| Preamplifier | MRT | AP01G18 | 1310002 | 1 year | 2014/10/07 |
| TRILOG Antenna | Schwarzbeck | VULB9162 | 9162-047 | 1 year | 2014/11/24 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-1167 | 1 year | 2014/11/24 |
| Temperature/Humidity Meter | Anymetre | TH101B | AC1-01 | 1 year | 2014/11/15 |

20dB Bandwidth

| Instrument | Manufacturer | Type No. | Serial No. | Cali. Interval | Cal. Due. Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4447A | MY45300136 | 1 year | 2014/11/08 |
| Loop Antenna | Schwarzbeck | FMZB1519 | 1519-041 | 1 year | 2014/11/24 |
| TRILOG Antenna | Schwarzbeck | VULB9162 | 9162-047 | 1 year | 2014/11/24 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-1167 | 1 year | 2014/11/24 |
| Preamplifier | MRT | AP01G18 | 1310002 | 1 year | 2014/10/07 |
| Temperature/Humidity Meter | Anymetre | TH101B | AC1-01 | 1 year | 2014/11/15 |

Transmission Time

| Instrument | Manufacturer | Type No. | Serial No. | Cali. Interval | Cal. Due. Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4447A | MY45300136 | 1 year | 2014/11/08 |
| TRILOG Antenna | Schwarzbeck | VULB9162 | 9162-047 | 1 year | 2014/11/24 |
| Preamplifier | MRT | AP01G18 | 1310002 | 1 year | 2014/10/07 |
| Temperature/Humidity Meter | Anymetre | TH101B | AC1-01 | 1 year | 2014/11/15 |

Duty Cycle

| Instrument | Manufacturer | Type No. | Serial No. | Cali. Interval | Cal. Due. Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent | E4447A | MY45300136 | 1 year | 2014/11/08 |
| TRILOG Antenna | Schwarzbeck | VULB9162 | 9162-047 | 1 year | 2014/11/24 |
| Preamplifier | MRT | AP01G18 | 1310002 | 1 year | 2014/10/07 |
| Temperature/Humidity Meter | Anymetre | TH101B | AC1-01 | 1 year | 2014/11/15 |

# 5. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

| Radiated Emission Measurement |
| --- |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>9kHz ~ 1GHz: ± 4.18dB<br>1GHz ~ 40GHz: ± 4.76dB |

# 6. TEST RESULT

## 6.1. Summary

**Company Name:** **ZHENGJI LIGHTING&ELECTRONICS TECHNOLOGY CO., LTD**

**FCC ID:** **2ACFYHHRGB14**

| FCC Part Section(s) | Test Description | Test Condition | Test Result |
|---|---|---|---|
| 15.205<br>15.231(b) | Radiated Spurious Emissions | Radiated | Pass |
| 15.231(c) | 20dB Bandwidth | | Pass |
| 15.231(b) | Transmission Time | | Pass |
| 15.231(b) | Duty Cycle | | Pass |

**Notes:**

1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

## 6.2. Radiated Emissions

### 6.2.1. Standard Applicable

According to §15.231(b), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

| Fundamental frequency (MHz) | Field strength of fundamental (microvolts/meter) | Field strength of spurious emissions (microvolts/meter) |
|---|---|---|
| 40.66-40.70 | 2,250 | 225 |
| 70-130 | 1,250 | 125 |
| 130-174 | [1] 1,250 to 3,750 | [1] 125 to 375 |
| 174-260 | 3,750 | 375 |
| 260-470 | [1] 3,750 to 12,500 | [1] 375 to 1,250 |
| Above 470 | 12,500 | 1,250 |

The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in §15.209, whichever limit permits a higher field strength.

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements start below or at the lowest crystal frequency.

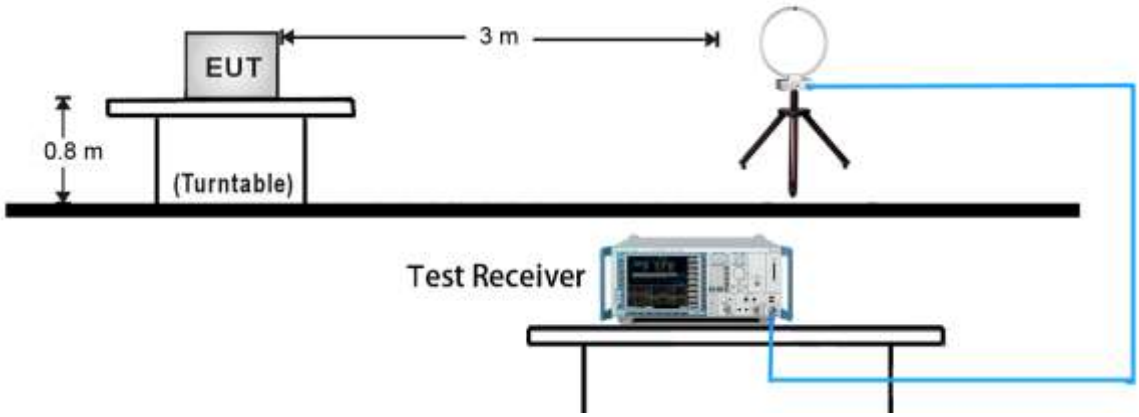
Compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

### 6.2.2. Test Procedure

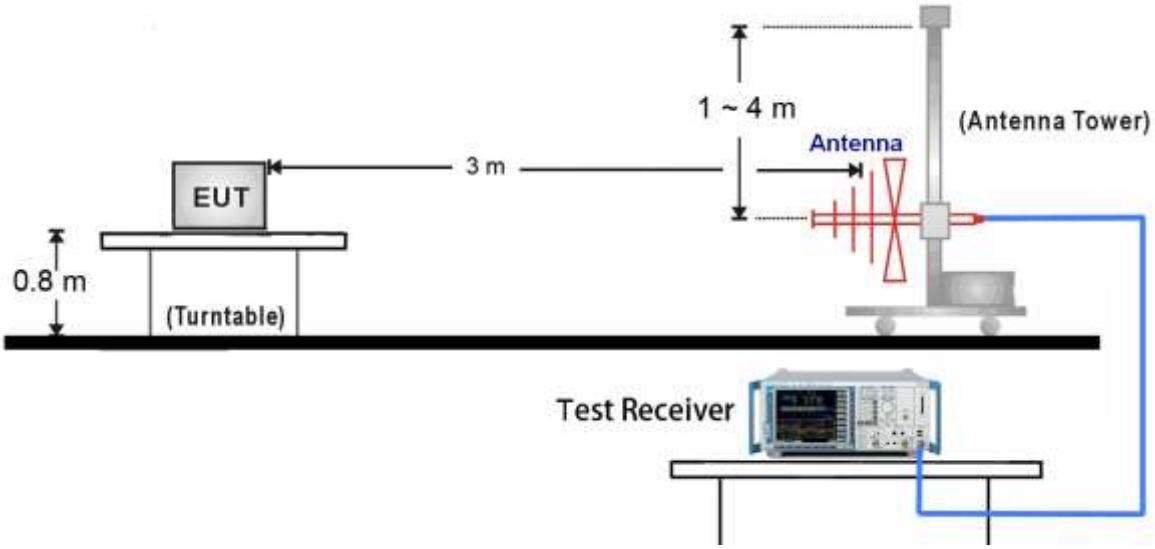
The setup of EUT is according with per ANSI C63.10-2009 measurement procedure. The specification used was with the FCC Part 15.231(b) and FCC Part 15.209 Limit.

### 6.2.3. Test Setup

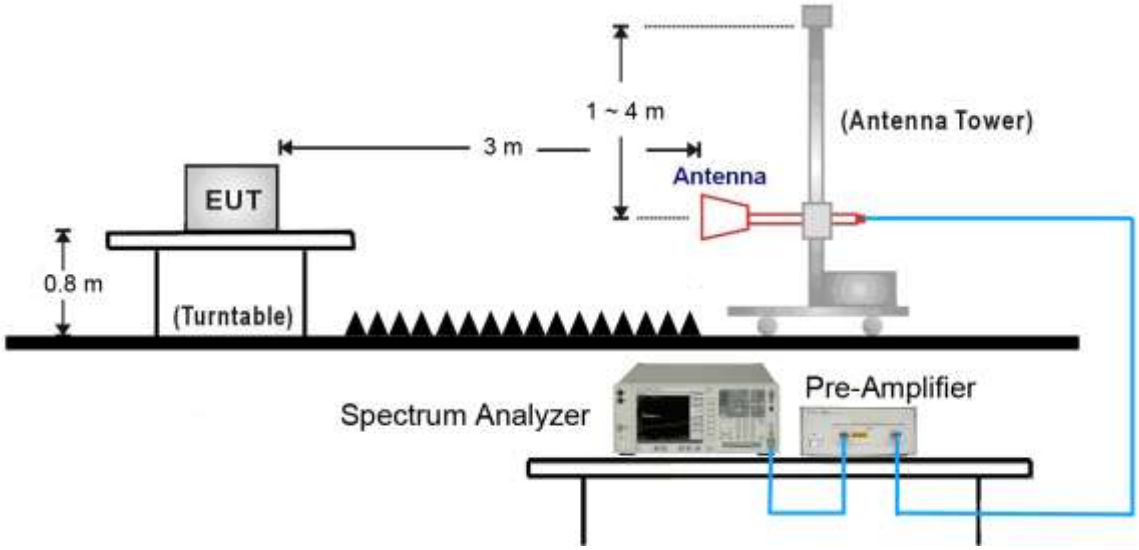
9kHz ~ 30MHz Test Setup:




30MHz ~ 1GHz Test Setup:

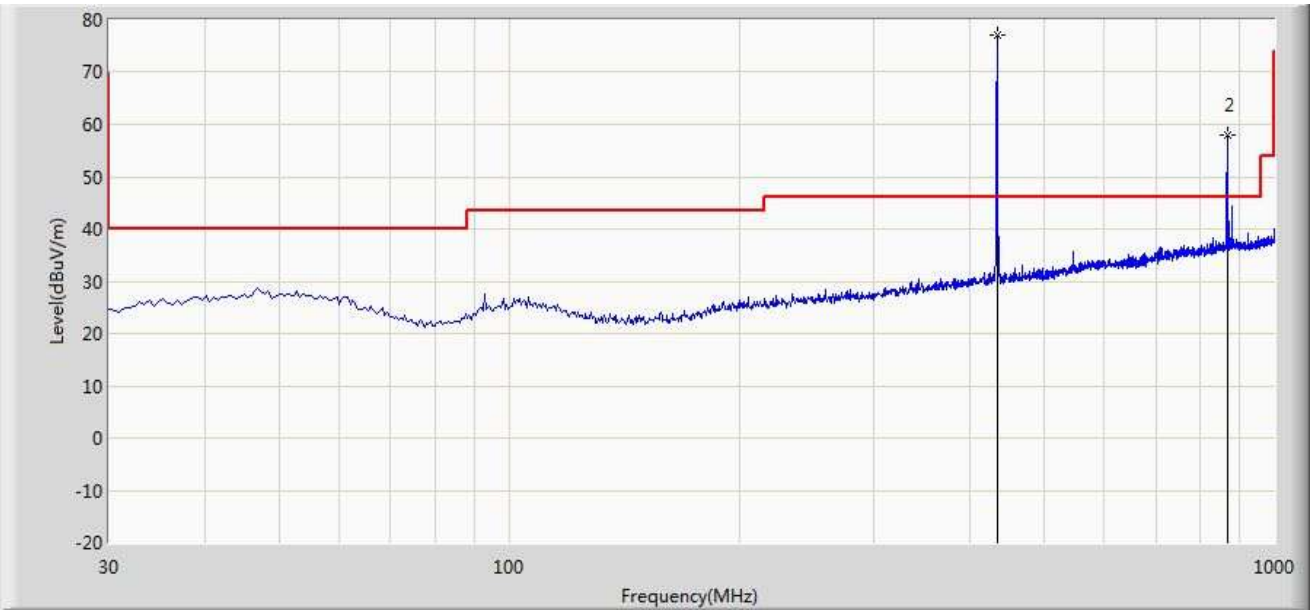


1GHz ~ 25GHz Test Setup:



### 6.2.4. Test Results

| | |
|---|---|
| Engineer: Roy Cheng | |
| Site: AC1 | Time: 2014/05/24 - 21:36 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: VULB9162_0.03-8GHz | Polarity: Horizontal |
| EUT: LED RF Remote Control | Power: By Battery |
| Note: Normal Operation | |



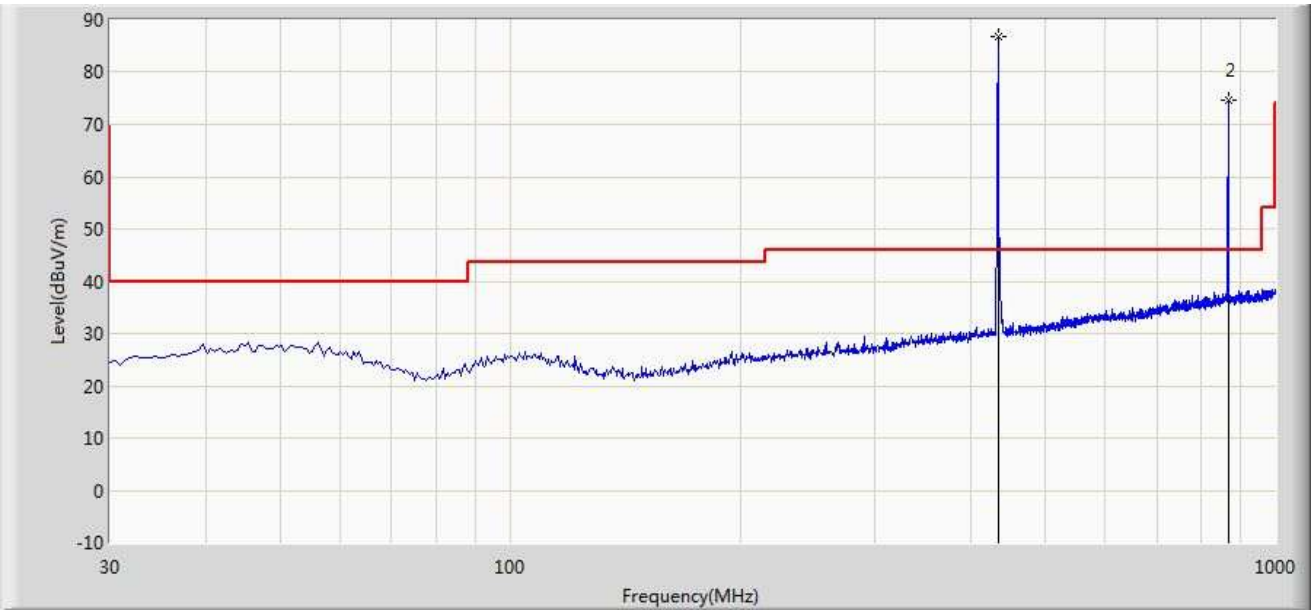

| No | Frequency (MHz) | Reading Level (dBuV) | Factor (dB) | Duty Cycle Factor (dB) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 434.005 | 60.541 | 16.643 | N/A | 77.184 | 100.8 | -23.616 | 100 | 123 | PK |
| | 434.005 | 60.541 | 16.643 | -10.5 | 66.684 | 80.8 | -14.116 | 100 | 112 | AV |
| 2 | 868.080 | 34.939 | 23.065 | N/A | 58.004 | 80.8 | -22.796 | 100 | 324 | PK |
| | 868.080 | 34.939 | 23.065 | -10.5 | 47.504 | 60.8 | -13.296 | 100 | 312 | AV |

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The “H” positioning is defined with the EUT lying flat on the test surface, the “H2” positioning is defined with the EUT standing up on its side, and the “V” positioning is defined with the EUT standing upright. The worst case test configuration was found in the EUT in the H positioning. The data reported in the table above was measured in this test setup.

| | |
|---|---|
| Engineer: Roy Cheng | |
| Site: AC1 | Time: 2014/05/24 - 21:57 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: VULB9162_0.03-8GHz | Polarity: Vertical |
| EUT: LED RF Remote Control | Power: By Battery |
| Note: Normal Operation | |



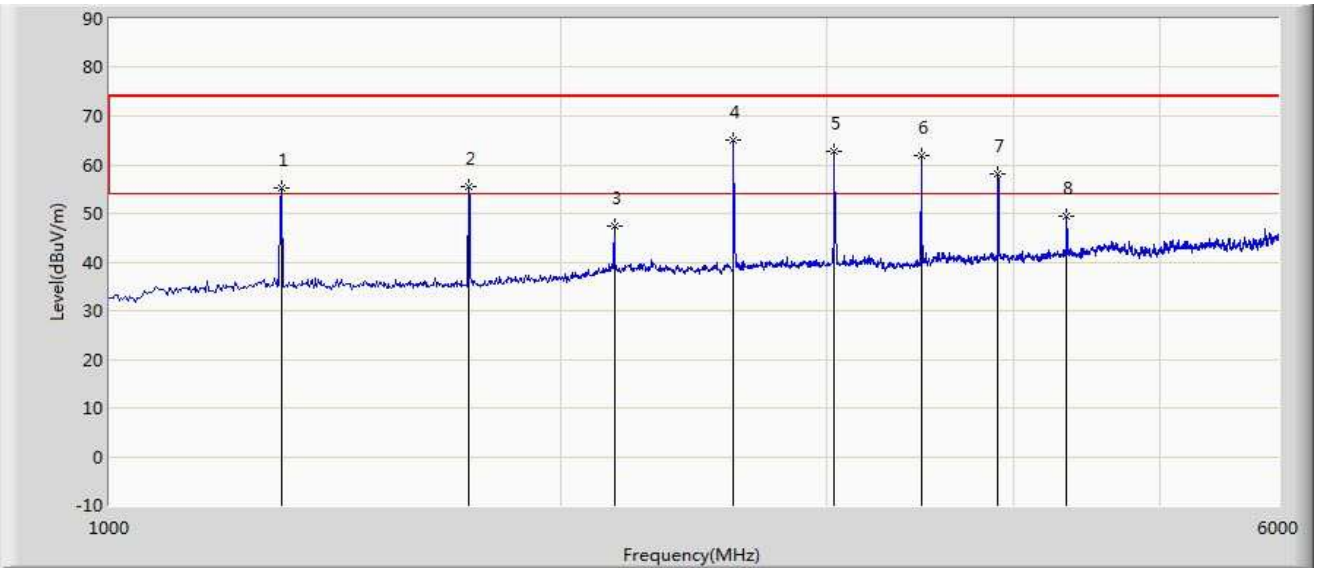

| No | Frequency (MHz) | Reading Level (dBuV) | Factor (dB) | Duty Cycle Factor (dB) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 434.005 | 64.311 | 16.643 | N/A | 80.954 | 100.8 | -19.846 | 100 | 124 | PK |
| | 434.005 | 64.311 | 16.643 | -10.5 | 70.454 | 80.8 | -10.346 | 100 | 132 | AV |
| 2 | 868.080 | 36.982 | 23.065 | N/A | 60.047 | 80.8 | -20.753 | 100 | 43 | PK |
| | 868.080 | 36.982 | 23.065 | -10.5 | 49.547 | 60.8 | -11.253 | 100 | 37 | AV |

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The “H” positioning is defined with the EUT lying flat on the test surface, the “H2” positioning is defined with the EUT standing up on its side, and the “V” positioning is defined with the EUT standing upright. The worst case test configuration was found in the EUT in the H positioning. The data reported in the table above was measured in this test setup.

| | |
|---|---|
| Engineer: Roy Cheng | |
| Site: AC1 | Time: 2014/05/24 - 21:57 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: LED RF Remote Control | Power: By Battery |
| Note: Normal Operation | |



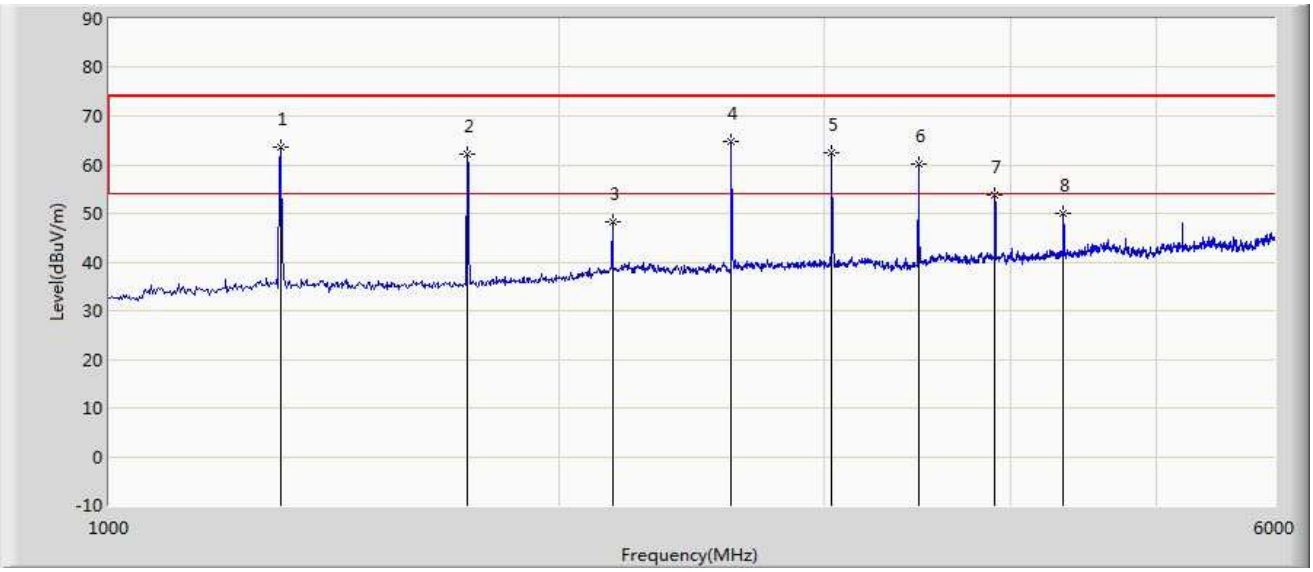

| No | Frequency (MHz) | Reading Level (dBuV) | Factor (dB) | Duty cycle Factor (dB) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | *1302.500 | 56.956 | -1.662 | N/A | 55.294 | 74.0 | -18.706 | 100 | 123 | PK |
| | *1302.500 | 56.956 | -1.662 | -10.5 | 44.794 | 54.0 | -9.206 | 100 | 134 | AV |
| 2 | 1735.000 | 56.182 | -0.614 | N/A | 55.568 | 80.8 | -25.232 | 100 | 27 | PK |
| | 1735.000 | 56.182 | -0.614 | -10.5 | 45.068 | 60.8 | -15.732 | 100 | 30 | AV |
| 3 | 2170.000 | 44.615 | 2.808 | N/A | 47.423 | 80.8 | -33.377 | 100 | 98 | PK |
| | 2170.000 | 44.615 | 2.808 | -10.5 | 36.923 | 60.8 | -23.877 | 100 | 96 | AV |
| 4 | 2605.000 | 62.258 | 2.913 | N/A | 65.171 | 80.8 | -15.629 | 100 | 36 | PK |
| | 2605.000 | 62.258 | 2.913 | -10.5 | 54.671 | 60.8 | -6.129 | 100 | 31 | AV |
| 5 | 3040.000 | 59.287 | 3.412 | N/A | 62.699 | 80.8 | -18.101 | 100 | 97 | PK |
| | 3040.000 | 59.287 | 3.412 | -10.5 | 52.199 | 60.8 | -8.601 | 100 | 89 | AV |
| 6 | 3472.500 | 58.161 | 3.703 | N/A | 61.864 | 80.8 | -18.936 | 100 | 102 | PK |
| | 3472.500 | 58.161 | 3.703 | -10.5 | 51.364 | 60.8 | -9.436 | 100 | 112 | AV |
| 7 | *3905.000 | 53.642 | 4.334 | N/A | 57.976 | 74.0 | -16.024 | 100 | 187 | PK |
| | *3905.000 | 53.642 | 4.334 | -10.5 | 47.476 | 54.0 | -6.524 | 100 | 189 | AV |
| 8 | *4340.000 | 44.113 | 5.361 | N/A | 49.474 | 74.0 | -24.526 | 100 | 320 | PK |
| | *4340.000 | 44.113 | 5.361 | -10.5 | 38.974 | 54.0 | -15.026 | 100 | 321 | AV |

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The worst case test configuration was found in the EUT in the H positioning. The data reported in the table above was measured in this test setup.

| | |
|---|---|
| Engineer: Roy Cheng | |
| Site: AC1 | Time: 2014/05/24 - 17:43 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: LED RF Remote Control | Power: By Battery |
| Note: Normal Operation | |




| No | Frequency (MHz) | Reading Level (dBuV) | Factor (dB) | Duty cycle Factor (dB) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | *1302.500 | 65.386 | -1.662 | N/A | 63.724 | 74.0 | -10.276 | 100 | 256 | PK |
| | *1302.500 | 65.386 | -1.662 | -10.5 | 53.224 | 54.0 | -0.776 | 100 | 247 | AV |
| 2 | 1737.500 | 62.862 | -0.614 | N/A | 62.248 | 80.8 | -18.552 | 100 | 132 | PK |
| | 1737.500 | 62.862 | -0.614 | -10.5 | 51.748 | 60.8 | -9.052 | 100 | 128 | AV |
| 3 | 2170.000 | 45.402 | 2.808 | N/A | 48.210 | 80.8 | -32.59 | 100 | 34 | PK |
| | 2170.000 | 45.402 | 2.808 | -10.5 | 37.710 | 60.8 | -23.09 | 100 | 35 | AV |
| 4 | 2602.500 | 61.879 | 2.913 | N/A | 64.792 | 80.8 | -16.008 | 100 | 97 | PK |
| | 2602.500 | 61.879 | 2.913 | -10.5 | 54.292 | 60.8 | -6.508 | 100 | 95 | AV |
| 5 | 3037.500 | 58.948 | 3.412 | N/A | 62.360 | 80.8 | -18.44 | 100 | 137 | PK |
| | 3037.500 | 58.948 | 3.412 | -10.5 | 51.860 | 60.8 | -8.940 | 100 | 134 | AV |
| 6 | 3472.500 | 56.321 | 3.703 | N/A | 60.024 | 80.8 | -20.776 | 100 | 78 | PK |
| | 3472.500 | 56.321 | 3.703 | -10.5 | 49.524 | 60.8 | -11.276 | 100 | 72 | AV |
| 7 | *3905.000 | 49.580 | 4.334 | N/A | 53.914 | 74.0 | -20.086 | 100 | 315 | PK |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *3905.000 | 49.580 | 4.334 | -10.5 | 43.414 | 54.0 | -10.586 | 100 | 310 | AV |
| 8 | *4340.000 | 44.554 | 5.361 | N/A | 49.915 | 74.0 | -24.085 | 100 | 28 | PK |
| | *4340.000 | 44.554 | 5.361 | -10.5 | 39.415 | 54.0 | -14.585 | 100 | 21 | AV |

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The worst case test configuration was found in the EUT in the H positioning. The data reported in the table above was measured in this test setup.

Note 3: Testing is carried out with frequency rang 9 kHz to the tenth harmonics. There is the ambient noise within frequency range 9 kHz ~ 30 MHz, the permissible value is not show in the report.

Note 4: The fundamental frequency is 433.92MHz, so the fundamental and spurious emissions radiated limit base on the operating frequency 433.92MHz.

Note 5: AV Measure Level = Peak Measure Level – Duty Cycle Factor.

Note 6: “*” means the frequency is in the Restricted bands.

## 6.3. 20dB Bandwidth

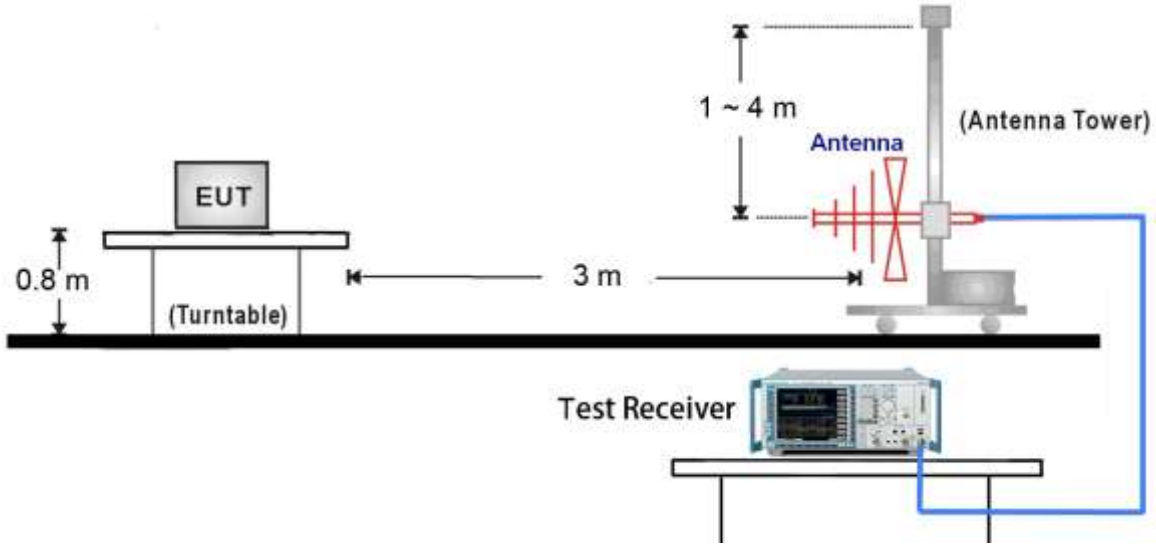
### 6.3.1. Standard Applicable

According to FCC Part 15.231(c), the bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

### 6.3.2. Test Procedure

With the EUT's antenna attached, the EUT's 20dB Bandwidth power was received by the test antenna, which was connected to the spectrum analyzer with the START, and STOP frequencies set to the EUT's operation band.

### 6.3.3. Test Setup

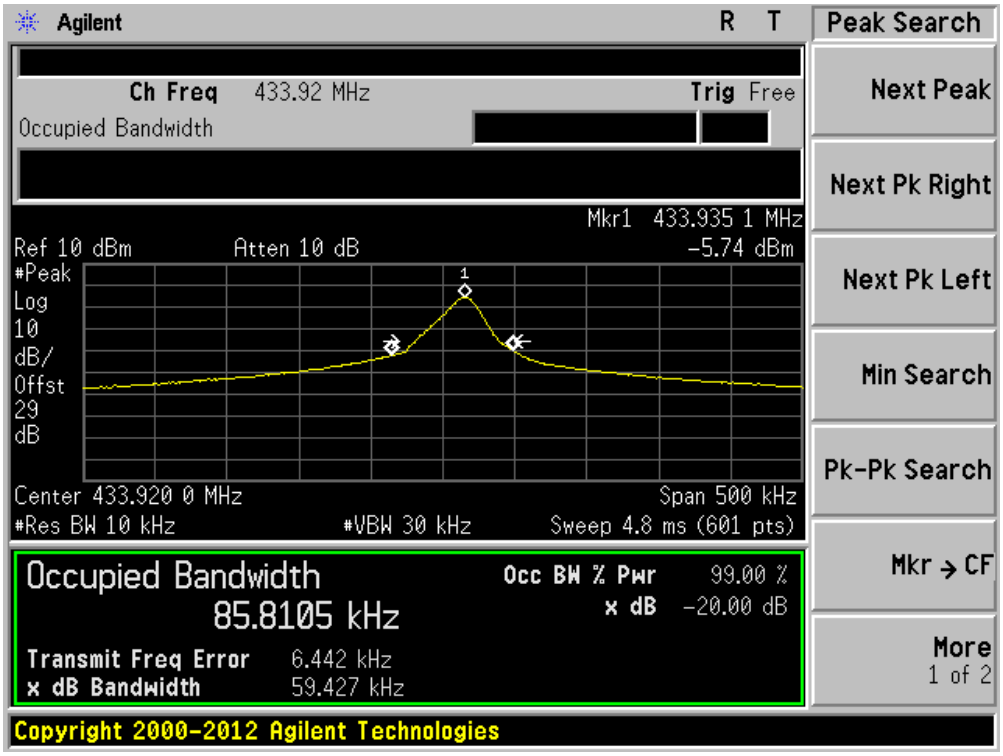


### 6.3.4. Test Result

| Test Frequency (MHz) | 20dB Bandwidth (KHz) | Limit (KHz) | Result |
|---|---|---|---|
| 433.92 | 59.427 | 1084.8 | Pass |

Limit = Fundamental Frequency X 0.25% = 433.92 MHz X 0.25% = 1084.8 KHz

20dB Bandwidth Test Plot



## 6.4. Duty Cycle

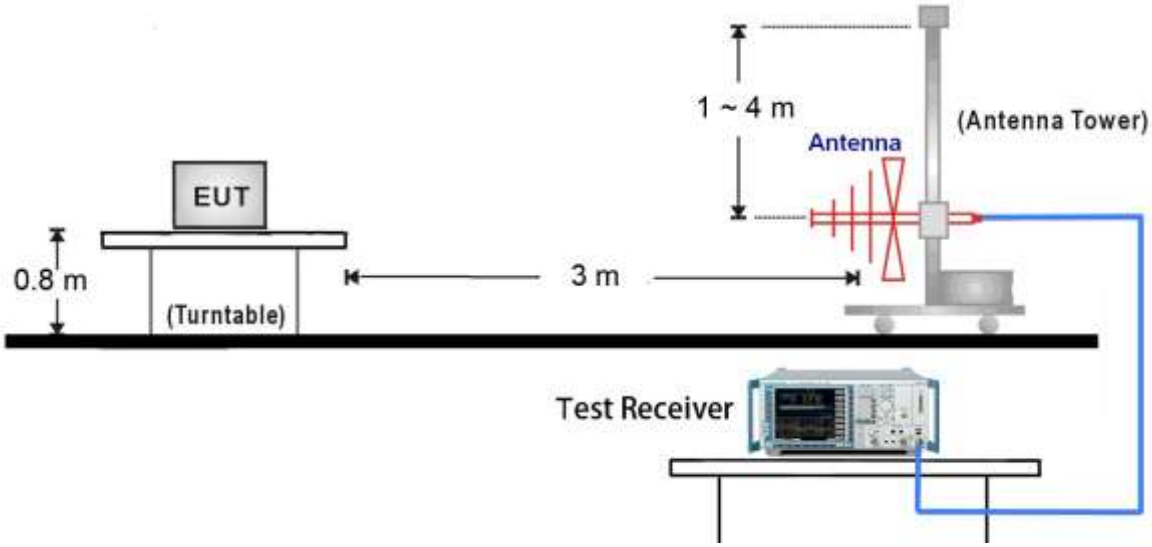
### 6.4.1. Standard Applicable

According to FCC Part 15.231(b) and 15.35(c), for pulse operation transmitter, the averaging pulsed emissions are calculated by peak value of measured emission plus duty cycle factor.

### 6.4.2. Test Procedure

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer. Set the center frequency to 433.92MHz, than set the spectrum analyzer to Zero Span for the release time reading. During the testing, the switch was released then the EUT automatically deactivated.

### 6.4.3. Test Setup



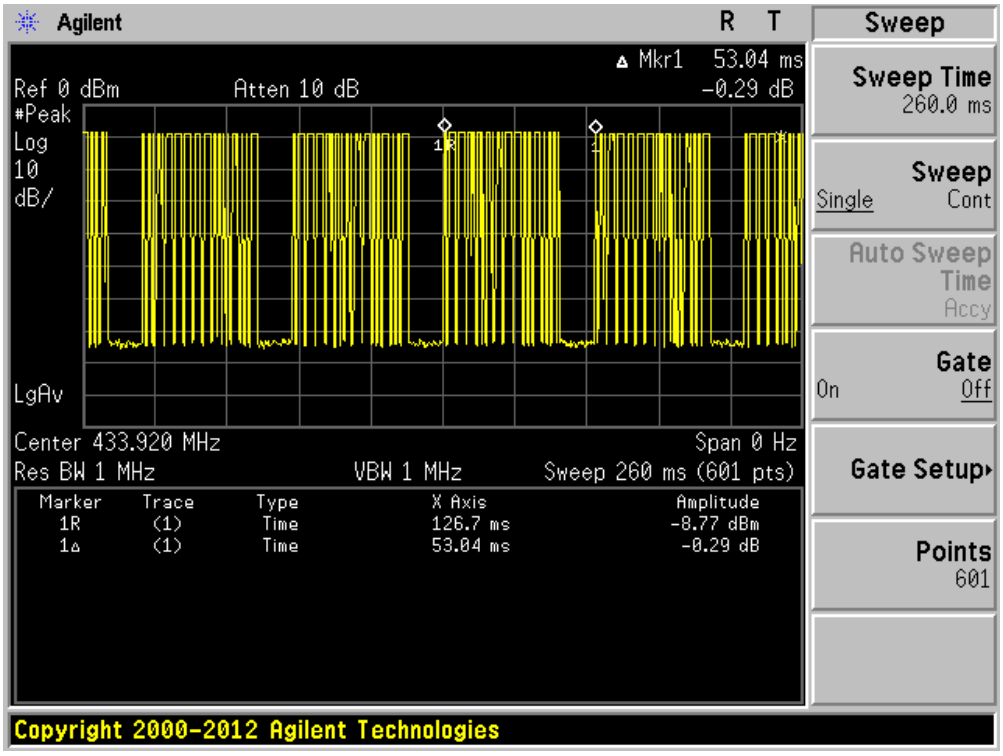
### 6.4.4. Test Result

| Test Period (Tp) (ms) | Total Time (Ton) (ms) | Duty Cycle (%) | Duty Cycle Factor (dB) |
|---|---|---|---|
| 53.04 | 15.83 | 29.85 | -10.5 |

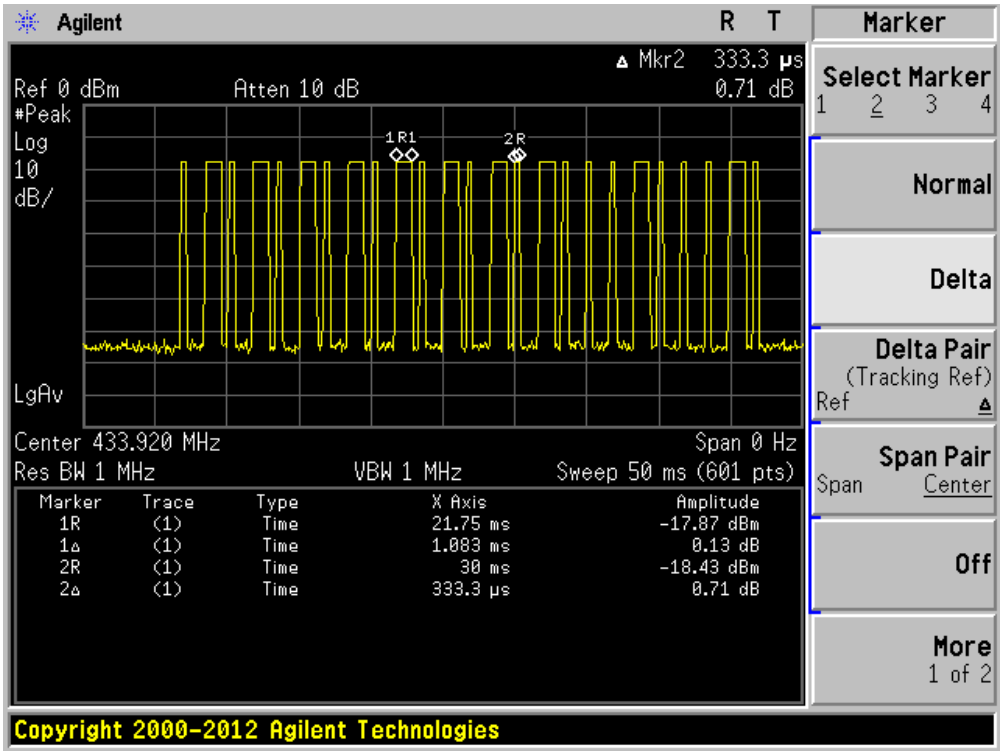
Note 1: Duty Cycle Factor = -20*Log(1/Duty Cycle).

Note 2: Effective period of the cycle = 1.083ms * Number of the $TX_{on}$ 1△+ 0.3333 * Number of the $TX_{on}$ 2△

The Duration of One Cycle



Effective Period of the Cycle



## 6.5. Transmission Time

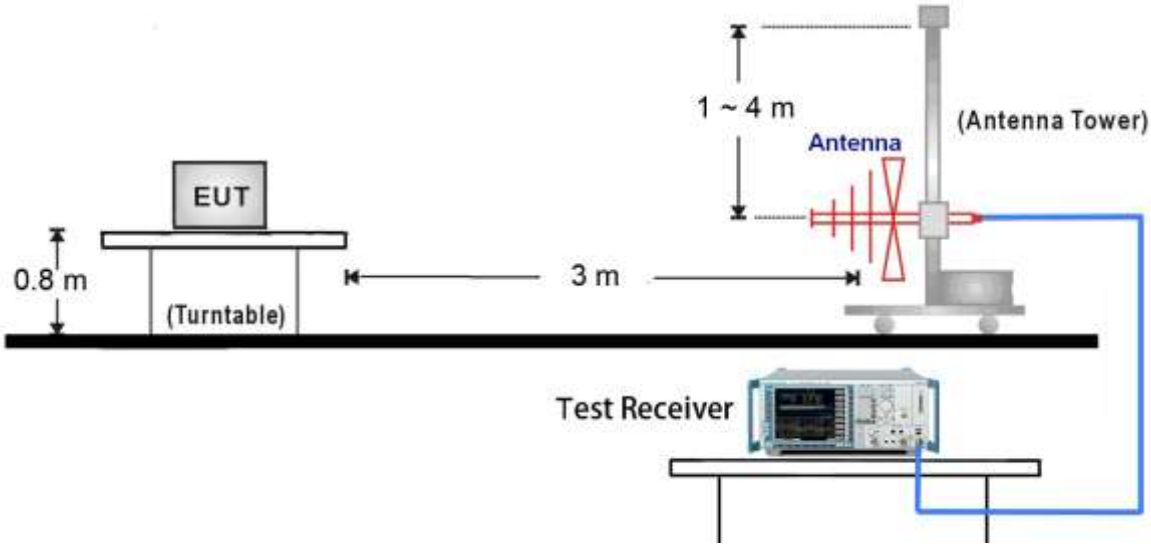
### 6.5.1. Standard Applicable

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

### 6.5.2. Test Procedure

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer. Set the center frequency to 433.92MHz, than set the spectrum analyzer to Zero Span for the release time reading. During the testing, the switch was released then the EUT automatically deactivated.

### 6.5.3. Test Setup

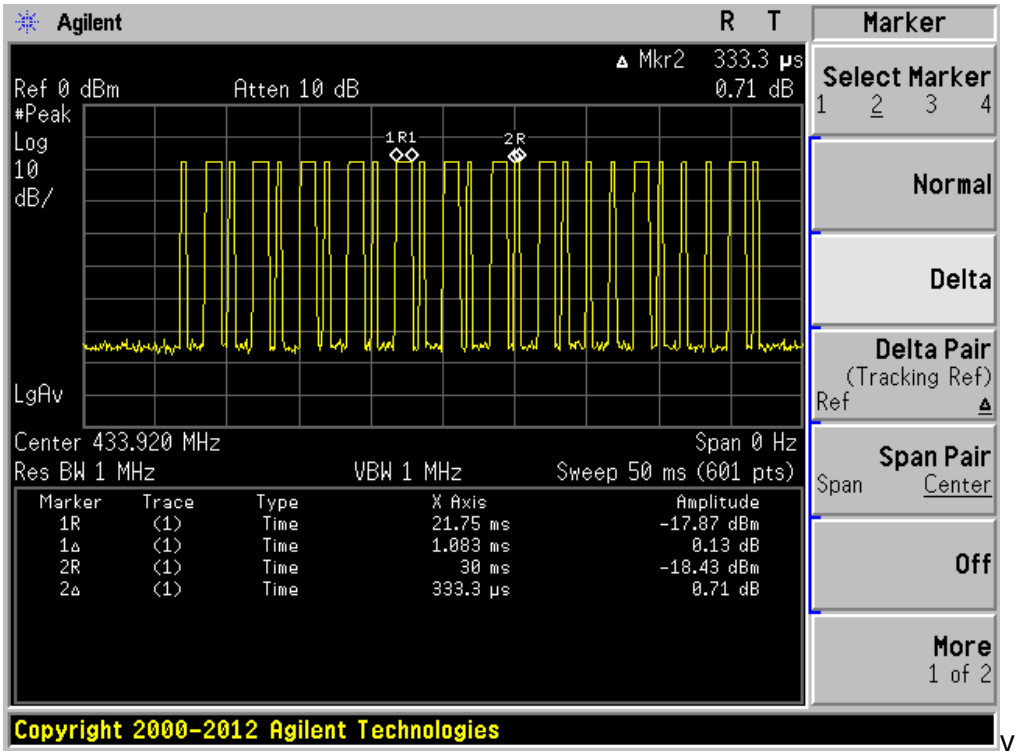


### 6.5.4. Test Result

| Item | Measured Value | Limit | Result |
|---|---|---|---|
| Transmission Time(Ton) | 0.0158 s | ⩽5 s | Pass |

Note: Effective period of the cycle = 1.083ms * Number of the $TX_{on}$ 1△+ 0.3333 * Number of the $TX_{on}$ 2△

Effective Period of the Cycle



# 7. CONCLUSION

The data collected relate only the item(s) tested and show that the **LED RF Remote Control FCC ID: 2ACFYHHRGB14** is in compliance with FCC Part 15.231 of the FCC Rules.

The End