



Report No.: SZEM190501364902

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# TEST REPORT

**Application No.:** SZEM1905013649CR(SGS SZ No.:T51910240010EM)

Applicant: ZHENCHENG TOYS FACTORY

Address of Applicant: CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE,

SHANTOU CITY China

Manufacturer: Shantou Chenghai Zhencheng Plastic Toys Factory

**Equipment Under Test (EUT):** 

**EUT Name:** R/C CAR

Model No.: Please refer to section 2 .

Please refer to section 2 of this report which indicates which model was

actually tested and which were electrically identical.

Country of Origin: CHINA Requested Age Grading: 3+

FCC ID: 2AAGP18SL02B

Standard(s): 47 CFR Part 15, Subpart C 15.249

**Date of Receipt:** 2019-05-08

**Date of Test:** 2019-05-08 to 2019-05-13

**Date of Issue:** 2019-05-16

Test Result: Pass\*

Keny Xu EMC Laboratory Manager

Ceny. Ku



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



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|         | Revision Record                    |            |  |          |  |  |
|---------|------------------------------------|------------|--|----------|--|--|
| Version | Version Chapter Date Modifier Rema |            |  |          |  |  |
| 01      |                                    | 2019-05-16 |  | Original |  |  |
|         |                                    |            |  |          |  |  |
|         |                                    |            |  |          |  |  |

| Authorized for issue by: |                             |   |
|--------------------------|-----------------------------|---|
|                          | Gebin Sun                   |   |
|                          | Gebin Sun /Project Engineer |   |
|                          | EvicFu                      |   |
|                          | Eric Fu /Reviewer           | _ |



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## **Test Summary**

| Radio Spectrum Technical Requirement |                                     |        |                                     |        |  |  |
|--------------------------------------|-------------------------------------|--------|-------------------------------------|--------|--|--|
| Item                                 | Standard                            | Method | Requirement                         | Result |  |  |
| Antenna Requirement                  | 47 CFR Part 15,<br>Subpart C 15.249 | N/A    | 47 CFR Part 15, Subpart<br>C 15.203 | Pass   |  |  |

| Radio Spectrum Matt  | er Part                             |   |   |        |
|--|-------------------------------------|---|---|--------|
| Item   | Standard                            | Method                                    | Requirement   | Result |
| 20dB Bandwidth   | 47 CFR Part 15,<br>Subpart C 15.249 | ANSI C63.10 (2013)<br>Section 6.9         | 47 CFR Part 15, Subpart<br>C 15.215                         | Pass   |
| Field Strength of the<br>Fundamental Signal<br>(15.249(a)) | 47 CFR Part 15,<br>Subpart C 15.249 | ANSI C63.10 (2013)<br>Section 6.5&6.6     | 47 CFR Part 15, Subpart<br>C 15.249(a)                      | Pass   |
| Restricted Band<br>Around Fundamental<br>Frequency         | 47 CFR Part 15,<br>Subpart C 15.249 | ANSI C63.10 (2013)<br>Section 6.10.5      | 47 CFR Part 15, Subpart<br>C 15.205 & 15.249(d) &<br>15.209 | Pass   |
| Radiated Emissions   | 47 CFR Part 15,<br>Subpart C 15.249 | ANSI C63.10 (2013)<br>Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart<br>C 15.209 & 15.249 (a),(d)        | Pass   |

#### **Declaration of EUT Family Grouping:**

Model No.: 18SL02, 19SL01, 17SL01A, 17SL01B, 17MUD12A, 17MUD21A, 19SL02B, 19SL02A, 17MUD01A, 171602A, 1701A, 1701B, 1702, 1801, 1802, 1901, 1902B, 1902A, 17XZ01B, 17XZ01A, 171601B, 171601A, 171602B, 171603B, 171604B, 172801, 172802, 171803, 171804, 171801B, 171801A, 171802B, 171802A, 17MUD12B, 17MUD13B, 17MUD13A, 17MUD14B, 17MUD14A, 17MUD21B, 17MUD22B, 17MUD23B, 17MUD22A, 17MUD23A, 17MUD01B, 17MUD02B, 17MUD02A, 173201, 17MT01B, 17MT01A, 17GS02B, 17GS03B, 17GS04B, 17GS05B, 17GS06B, 17GS07B, 17GS08B, 17GS09B, 17GS02A, 17GS03A, 17GS04A, 17GS05A, 17GS06A, 17GS07A, 17GS08A, 17GS09A, 333-TK01, 333-TK11, 333-TK01A, 333-TK11A, 333-ZJ01, 333-ZJ01A, 333-ZJ11, 333-ZJ11A, 333-P011A, 333-P012A, 333-P013A, 333-P014A, 333-P015A, 333-VS03, 333-VS03A

Only the model 18SL02 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on colour.



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## **General Information**

## 4.1 Details of E.U.T.

| Power supply:        | 3V DC(1.5V x 2 "AA" Size Batteries) for TX |
|----------------------|--|
| Operating Frequency: | 2.4GHz(2420MHz-2465MHz)                    |
| Channel number:      | 46   |
| Channel Spacing      | 1MHz                                       |
| Modulation Type:     | GFSK                                       |
| Sample Type:         | Portable production                        |
| Antenna Type:        | Integral                                   |
| Antenna Gain:        | 0dBi                                       |

## 4.2 Description of Support Units

The EUT has been tested as an independent unit.

## 4.3 Measurement Uncertainty

| No. | Item                            | Measurement Uncertainty |
|-----|---------------------------------|-------------------------|
| 1   | Occupied Bandwidth              | ± 3%                    |
| 2   | DE Dadiated news                | ± 4.5dB (below 1GHz)    |
| 2   | RF Radiated power               | ± 4.8dB (above 1GHz)    |
| 0   | Dedicted Courses and seion toot | ± 4.5dB (Below 1GHz)    |
| 3   | Radiated Spurious emission test | ± 4.8dB (Above 1GHz)    |
| 4   | Temperature test                | ± 1 ℃                   |
| 5   | Humidity test                   | ± 3%                    |
| 6   | Supply voltages                 | ± 1.5%                  |
| 7   | Time                            | ± 3%                    |



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#### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

#### 4.5 Test Facility

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

#### • CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

#### A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz. Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

#### • FCC -Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

## • Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 4.6 Deviation from Standards

None

#### 4.7 Abnormalities from Standard Conditions

None



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# **Equipment List**

| 20dB Bandwidth       |                      |                         |              |            |              |
|----------------------|----------------------|-------------------------|--------------|------------|--------------|
| Equipment            | Manufacturer         | Model No                | Inventory No | Cal Date   | Cal Due Date |
| DC Power Supply      | ZhaoXin              | RXN-305D                | SEM011-02    | 2018-09-25 | 2019-09-24   |
| Spectrum Analyzer    | Rohde & Schwarz      | FSP                     | SEM004-06    | 2018-09-27 | 2019-09-26   |
| Measurement Software | JS Tonscend          | JS1120-2<br>BT/WIFI V2. | N/A          | N/A        | N/A          |
| Coaxial Cable        | SGS                  | N/A                     | SEM031-02    | 2018-07-12 | 2019-07-11   |
| Attenuator           | Weinschel Associates | WA41                    | SEM021-09    | N/A        | N/A          |
| Signal Generator     | KEYSIGHT             | N5173B                  | SEM006-05    | 2018-09-27 | 2019-09-26   |
| Power Meter          | Rohde & Schwarz      | NRVS                    | SEM014-02    | 2018-09-25 | 2019-09-24   |

| Field Strength of the Fundamental Signal (15.249(a)) |  |                     |              |            |              |  |
|--|--|---------------------|--------------|------------|--------------|--|
| Equipment  | Manufacturer                             | Model No            | Inventory No | Cal Date   | Cal Due Date |  |
| 3m Semi-Anechoic<br>Chamber                          | AUDIX                                    | N/A                 | SEM001-02    | 2018-03-13 | 2021-03-12   |  |
| Measurement Software                                 | AUDIX                                    | e3 V8.2014-6-<br>27 | N/A          | N/A        | N/A          |  |
| Coaxial Cable  | SGS                                      | N/A                 | SEM026-01    | 2018-07-12 | 2019-07-11   |  |
| EXA Spectrum Analyzer                                | AgilentTechnologies Inc                  | N9010A              | SEM004-12    | 2019-04-12 | 2020-04-11   |  |
| BiConiLog Antenna<br>(26-3000MHz)                    | ETS-Lindgren                             | 3142C               | SEM003-01    | 2017-06-27 | 2020-06-26   |  |
| Horn Antenna<br>(1-18GHz)                            | Rohde & Schwarz                          | HF907               | SEM003-07    | 2018-04-13 | 2021-04-12   |  |
| Horn Antenna<br>(15GHz-40GHz)                        | Schwarzbeck                              | BBHA 9170           | SEM003-15    | 2017-10-17 | 2020-10-16   |  |
| Pre-amplifier<br>(0.1-1300MHz)                       | HP                                       | 8447D               | SEM005-02    | 2018-09-25 | 2019-09-24   |  |
| Pre-Amplifier<br>(0.1-26.5GHz)                       | Compliance<br>Directions Systems<br>Inc. | PAP-0126            | SEM004-11    | 2018-11-12 | 2019-11-11   |  |
| Pre-amplifier<br>(18-26GHz)                          | Rohde & Schwarz                          | CH14-H052           | SEM005-17    | 2019-04-01 | 2020-03-31   |  |
| Pre-amplifier<br>(26GHz-40GHz)                       | Compliance<br>Directions Systems<br>Inc. | PAP-2640-50         | SEM005-08    | 2019-04-01 | 2020-03-31   |  |
| DC Power Supply                                      | Zhao Xin                                 | RXN-305D            | SEM011-02    | 2018-09-25 | 2019-09-24   |  |
| Active Loop Antenna                                  | ETS-Lindgren                             | 6502                | SEM003-08    | 2017-08-22 | 2020-08-21   |  |



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| Restricted Band Around Fundamental Frequency |  |                     |              |            |              |  |
|--|--|---------------------|--------------|------------|--------------|--|
| Equipment                                    | Manufacturer                             | Model No            | Inventory No | Cal Date   | Cal Due Date |  |
| 3m Semi-Anechoic<br>Chamber                  | AUDIX                                    | N/A                 | SEM001-02    | 2018-03-13 | 2021-03-12   |  |
| Measurement Software                         | AUDIX                                    | e3 V8.2014-6-<br>27 | N/A          | N/A        | N/A          |  |
| Coaxial Cable                                | SGS                                      | N/A                 | SEM026-01    | 2018-07-12 | 2019-07-11   |  |
| EXA Spectrum Analyzer                        | AgilentTechnologies Inc                  | N9010A              | SEM004-12    | 2019-04-12 | 2020-04-11   |  |
| BiConiLog Antenna<br>(26-3000MHz)            | ETS-Lindgren                             | 3142C               | SEM003-01    | 2017-06-27 | 2020-06-26   |  |
| Horn Antenna<br>(1-18GHz)                    | Rohde & Schwarz                          | HF907               | SEM003-07    | 2018-04-13 | 2021-04-12   |  |
| Horn Antenna<br>(15GHz-40GHz)                | Schwarzbeck                              | BBHA 9170           | SEM003-15    | 2017-10-17 | 2020-10-16   |  |
| Pre-amplifier<br>(0.1-1300MHz)               | HP                                       | 8447D               | SEM005-02    | 2018-09-25 | 2019-09-24   |  |
| Pre-Amplifier<br>(0.1-26.5GHz)               | Compliance<br>Directions Systems<br>Inc. | PAP-0126            | SEM004-11    | 2018-11-12 | 2019-11-11   |  |
| Pre-amplifier<br>(18-26GHz)                  | Rohde & Schwarz                          | CH14-H052           | SEM005-17    | 2019-04-01 | 2020-03-31   |  |
| Pre-amplifier<br>(26GHz-40GHz)               | Compliance<br>Directions Systems<br>Inc. | PAP-2640-50         | SEM005-08    | 2019-04-01 | 2020-03-31   |  |
| DC Power Supply                              | Zhao Xin                                 | RXN-305D            | SEM011-02    | 2018-09-25 | 2019-09-24   |  |
| Active Loop Antenna                          | ETS-Lindgren                             | 6502                | SEM003-08    | 2017-08-22 | 2020-08-21   |  |

| Radiated Emissions(Above 1GHz)    |                         |                     |                     |            |              |  |
|-----------------------------------|-------------------------|---------------------|---------------------|------------|--------------|--|
| Equipment                         | Manufacturer            | Model No            | <b>Inventory No</b> | Cal Date   | Cal Due Date |  |
| 3m Semi-Anechoic<br>Chamber       | AUDIX                   | N/A                 | SEM001-02           | 2018-03-13 | 2021-03-12   |  |
| Measurement Software              | AUDIX                   | e3 V8.2014-6-<br>27 | N/A                 | N/A        | N/A          |  |
| Coaxial Cable                     | SGS                     | N/A                 | SEM026-01           | 2018-07-12 | 2019-07-11   |  |
| EXA Spectrum Analyzer             | AgilentTechnologies Inc | N9010A              | SEM004-12           | 2019-04-12 | 2020-04-11   |  |
| BiConiLog Antenna<br>(26-3000MHz) | ETS-Lindgren            | 3142C               | SEM003-01           | 2017-06-27 | 2020-06-26   |  |
| Horn Antenna<br>(1-18GHz)         | Rohde & Schwarz         | HF907               | SEM003-07           | 2018-04-13 | 2021-04-12   |  |



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| Horn Antenna<br>(15GHz-40GHz)  | Schwarzbeck                              | BBHA 9170   | SEM003-15 | 2017-10-17 | 2020-10-16 |
|--------------------------------|--|-------------|-----------|------------|------------|
| Pre-amplifier<br>(0.1-1300MHz) | HP                                       | 8447D       | SEM005-02 | 2018-09-25 | 2019-09-24 |
| Pre-Amplifier<br>(0.1-26.5GHz) | Compliance<br>Directions Systems<br>Inc. | PAP-0126    | SEM004-11 | 2018-11-12 | 2019-11-11 |
| Pre-amplifier<br>(18-26GHz)    | Rohde & Schwarz                          | CH14-H052   | SEM005-17 | 2019-04-01 | 2020-03-31 |
| Pre-amplifier<br>(26GHz-40GHz) | Compliance<br>Directions Systems<br>Inc. | PAP-2640-50 | SEM005-08 | 2019-04-01 | 2020-03-31 |
| DC Power Supply                | Zhao Xin                                 | RXN-305D    | SEM011-02 | 2018-09-25 | 2019-09-24 |
| Active Loop Antenna            | ETS-Lindgren                             | 6502        | SEM003-08 | 2017-08-22 | 2020-08-21 |

| RE in Chamber(30MHz-              | 1GHz)                |                     |               |            |               |
|-----------------------------------|----------------------|---------------------|---------------|------------|---------------|
| Test Equipment                    | Manufacturer         | Model No.           | Inventory No. | Cal. Date  | Cal. Due date |
| 3m Semi-Anechoic<br>Chamber       | ETS-LINDGREN         | N/A                 | SEM001-01     | 2017-08-05 | 2020-08-04    |
| MXE EMI Receiver<br>(20Hz-8.4GHz) | Agilent Technologies | N9038A              | SEM004-05     | 2018-09-25 | 2019-09-24    |
| BiConiLog Antenna<br>(26-3000MHz) | ETS-LINDGREN         | 3142C SEM003-0      |               | 2017-06-27 | 2020-06-26    |
| Pre-amplifier<br>(0.1-1300MHz)    | Agilent Technologies | 8447D               | SEM005-01     | 2019-04-01 | 2020-03-31    |
| Measurement Software              | AUDIX                | e3 V8.2014-6-<br>27 | N/A           | N/A        | N/A           |
| Coaxial Cable                     | SGS                  | N/A                 | SEM025-01     | 2018-07-12 | 2019-07-11    |

| General used equipmen              | t   |          |              |            |              |
|------------------------------------|---|----------|--------------|------------|--------------|
| Equipment                          | Manufacturer                                    | Model No | Inventory No | Cal Date   | Cal Due Date |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory  | ZJ1-2B   | SEM002-03    | 2018-09-27 | 2019-09-26   |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory  | ZJ1-2B   | SEM002-04    | 2018-09-27 | 2019-09-26   |
| Humidity/ Temperature Indicator    | Mingle  | N/A      | SEM002-08    | 2018-09-27 | 2019-09-26   |
| Barometer                          | Changchun<br>Meteorological<br>Industry Factory | DYM3     | SEM002-01    | 2019-04-04 | 2020-04-03   |



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#### 6 Radio Spectrum Technical Requirement

#### 6.1 Antenna Requirement

## 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 Limit:

#### 15.203 requirement:

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.

#### 6.1.2 Conclusion

**EUT Antenna:** 

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

Antenna location: Refer to Appendix(Internal photos)



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## **Radio Spectrum Matter Test Results**

#### 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215 Test Method: ANSI C63.10 (2013) Section 6.9

Limit: N/A

#### 7.1.1 E.U.T. Operation

Operating Environment:

Temperature: Humidity: 49.8 % RH Atmospheric Pressure: 1005 mbar 24.5 °C

Test mode b:TX mode Keep the EUT in transmitting with modulation mode.

#### 7.1.2 Test Setup Diagram

# Spectrum Analyzer E.U.T Non-Conducted Table

## Ground Reference Plane

#### 7.1.3 Measurement Procedure and Data

| Test channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest       | 7.917                | Pass    |
| Middle       | 6.442                | Pass    |
| Highest      | 5.545                | Pass    |



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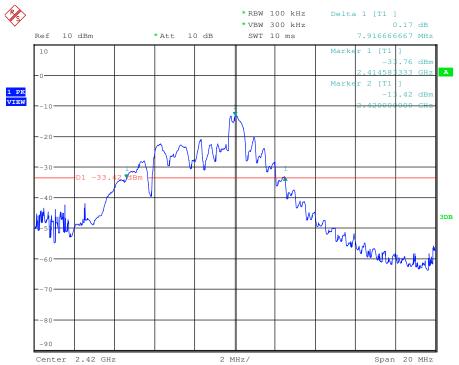
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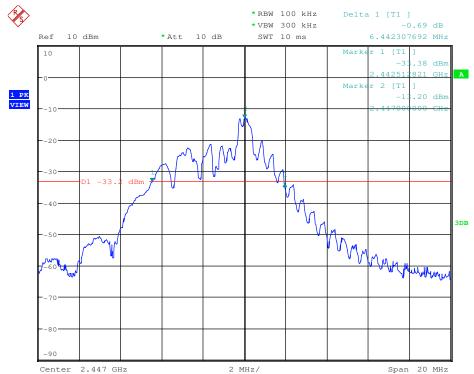
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#### Mode:b; Channel:Low



#### Mode:b; Channel:middle





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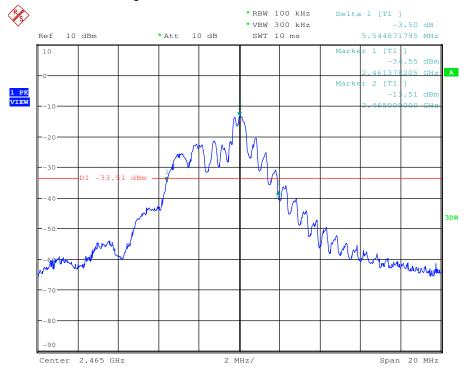
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#### Mode:b; Channel:High





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#### 7.2 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a) ANSI C63.10 (2013) Section 6.5&6.6 Test Method:

Measurement Distance: 3m

Limit:

| Fundamental frequency(MHz) | Field strength of fundamental(millivolts/meter) | Field strength of harmonics(microvolts/meter) |
|----------------------------|---|---|
| 902-928                    | 50  | 500   |
| 2400-2483.5                | 50  | 500   |
| 5725-5875                  | 50  | 500   |
| 24000-24250                | 250   | 2500  |

Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

For fundamental frequency in "902-928MHz", the field strength of fundamental is based on Quasi-Peak.

## Average value:

| Calculate Formula: | Average value=Peak value + PDCF  |
|--------------------|----------------------------------|
|                    | PDCF=20 log(Duty cycle)          |
|                    | Duty cycle= T on time / T period |
|                    | Ton time =1.186ms                |
| Test data:         | T period =6.042ms                |
| rest data.         | Duty cycle=19.63%                |
|                    | PDCF value= -14.14dB             |



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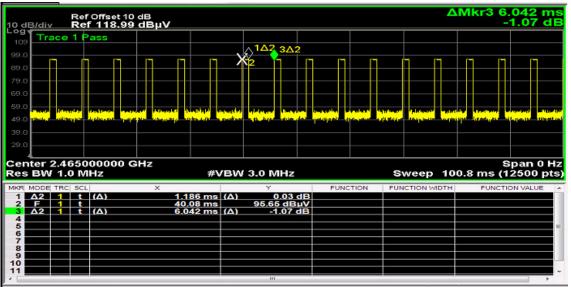
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#### Duty cycle test plots:



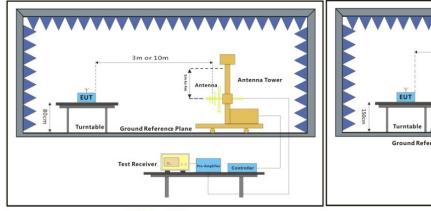
## 7.2.1 E.U.T. Operation

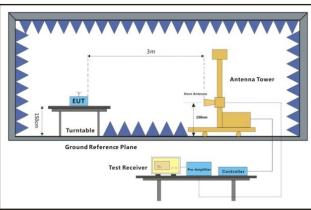
Operating Environment:

Temperature: 22 °C Humidity: 55 % RH Atmospheric Pressure: 1005 mbar

Test mode b:TX mode\_Keep the EUT in transmitting with modulation mode.

#### 7.2.2 Test Setup Diagram





Above 1GHz 30MHz-1GHz



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#### 7.2.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

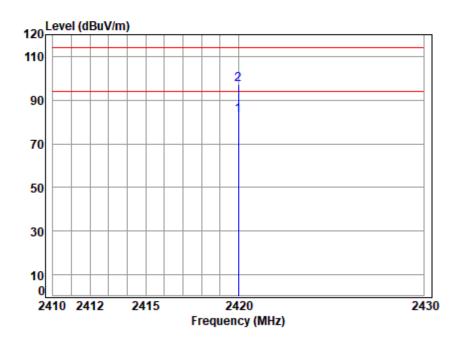




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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



: chamber Site

Condition: 3m HORIZONTAL

: 13649CR Job No

2420.000

1

: 2420 Field strength Mode

Cable Ant Preamp Limit 0ver Read Freq Loss Factor Factor Level Level Line Limit Remark dBuV dBuV/m dBuV/m MHz dB dB/m dB dB 5.52 28.57 41.18 90.29 83.20 94.00 -10.80 Average 2420.000

5.52 28.57 41.18 104.43 97.34 114.00 -16.66 Peak



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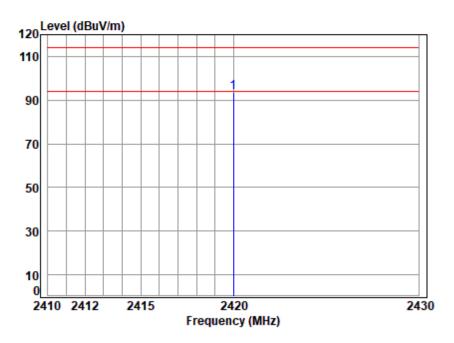
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



: chamber Site Condition: 3m VERTICAL

: 13649CR Job No

: 2420 Field strength Mode

> Cable Ant Preamp Limit 0ver Read

Freq Loss Factor Factor Level Level Line Limit Remark

dBuV dBuV/m dBuV/m MHz dB dB/m dΒ dB

2420.000 5.52 28.57 41.18 100.81 93.72 114.00 -20.28 Peak



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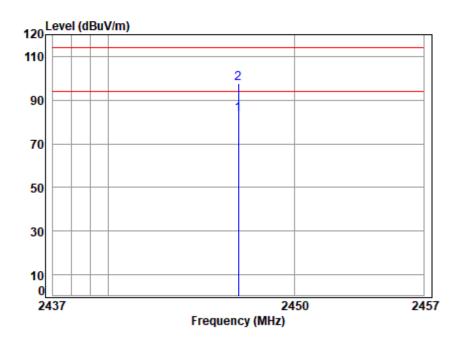
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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 13649CR Job No

2447.000

1

: 2447 Field strength Mode

> Cable Ant Preamp Limit 0ver Read Loss Factor Factor Freq Level Level Line Limit Remark dBuV dBuV/m dBuV/m MHz dB dB/m dB dB 5.55 28.61 41.20 90.61 83.57 94.00 -10.43 Average 2447.000

> > 5.55 28.61 41.20 104.75 97.71 114.00 -16.29 Peak



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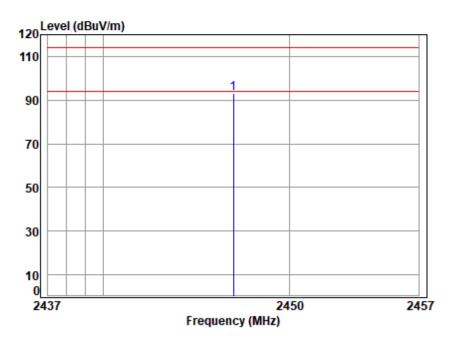
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:middle



Site : chamber Condition: 3m VERTICAL : 13649CR Job No

: 2447 Field strength Mode

Cable Ant Preamp Limit 0ver Read

Freq Loss Factor Factor Level Level Line Limit Remark

dBuV dBuV/m dBuV/m MHz dB dB/m dΒ dB

2447.000 5.55 28.61 41.20 100.05 93.01 114.00 -20.99 Peak



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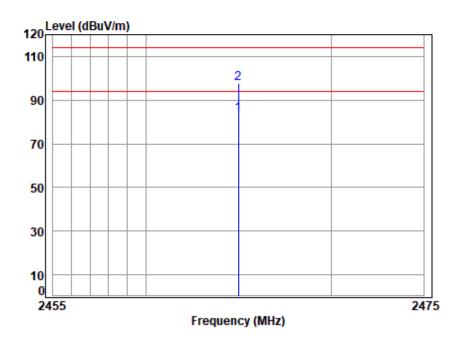
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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 13649CR Job No

1

: 2465 Field strength Mode

> Cable Ant Preamp Limit 0ver Read Loss Factor Factor Freq Level Level Line Limit Remark dBuV dBuV/m dBuV/m MHz dB dB/m dB dB 28.64 41.20 90.63 83.64 94.00 -10.36 Average 2465.000 5.57 2465.000 5.57 28.64 41.20 104.77 97.78 114.00 -16.22 Peak



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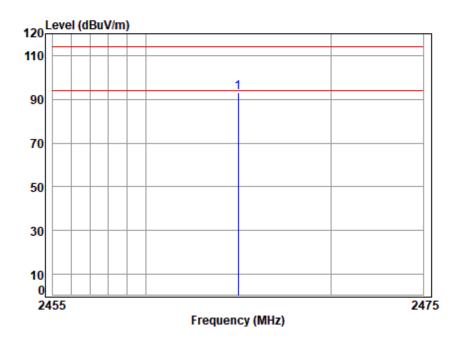
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Site : chamber Condition: 3m VERTICAL

Job No : 13649CR

Mode : 2465 Field strength

> Cable Ant Preamp Read Limit 0ver Loss Factor Factor Limit Remark Freq Level Line Level MHz dB dB/m dBuV dBuV/m dBuV/m dB

1 2465.000 5.57 28.64 41.20 99.99 93.00 114.00 -21.00 Peak

#### Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) The peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the above measurement data were shown in the report.



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#### 7.3 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209

ANSI C63.10 (2013) Section 6.10.5 Test Method:

Measurement Distance: 3m

Limit:

| Frequency     | Limit (dBuV/m @3m) | Remark           |
|---------------|--------------------|------------------|
| 30MHz-88MHz   | 40.0               | Quasi-peak Value |
| 88MHz-216MHz  | 43.5               | Quasi-peak Value |
| 216MHz-960MHz | 46.0               | Quasi-peak Value |
| 960MHz-1GHz   | 54.0               | Quasi-peak Value |
| Above 1GHz    | 54.0               | Average Value    |
| Above 1GHz    | 74.0               | Peak Value       |

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

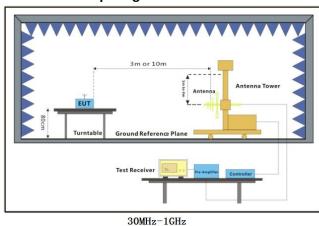
#### 7.3.1 E.U.T. Operation

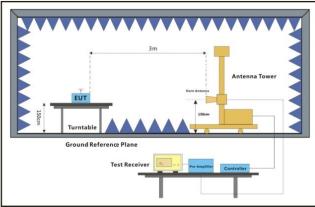
Operating Environment:

Temperature: 24.6 °C Humidity: 56.2 % RH Atmospheric Pressure: 1005 mbar

Test mode b:TX mode Keep the EUT in transmitting with modulation mode.

#### 7.3.2 Test Setup Diagram





Above 1GHz



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#### 7.3.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

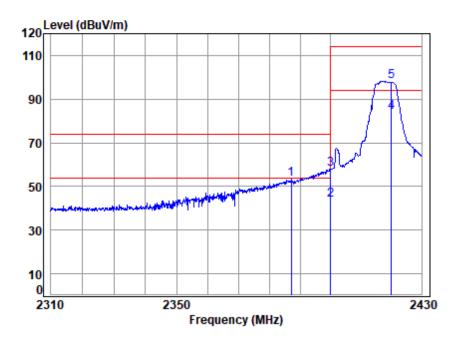




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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 13649CR

Mode : 2420 Band edge

|        | Freq                 |    |      |    |      |        | Limit<br>Line |    | Remark |
|--------|----------------------|----|------|----|------|--------|---------------|----|--------|
|        | MHz                  | dB | dB/m | dB | dBuV | dBuV/m | dBuV/m        | dB |        |
| 1      | 2387.065             |    |      |    |      |        |               |    | •      |
| 2<br>3 | 2400.000<br>2400.000 |    |      |    |      |        | 74.00         |    |        |
| 4<br>5 | 2420.000<br>2420.000 |    |      |    |      |        |               |    | _      |



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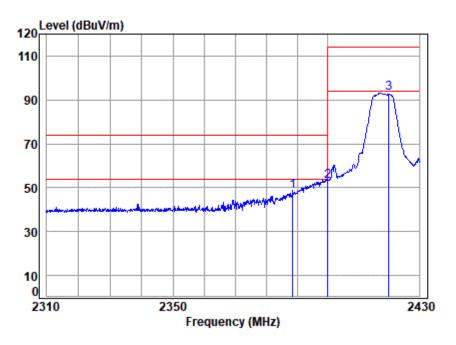
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 13649CR

Mode : 2420 Band edge

| . 24     | ZO Dan | u euge |                |        |        |        |        |        |
|----------|--------|--------|----------------|--------|--------|--------|--------|--------|
|          | Cable  | Ant    | Preamp         | Read   |        | Limit  | 0ver   |        |
| Freq     | Loss   | Factor | Factor         | Level  | Level  | Line   | Limit  | Remark |
|          |        |        |                |        |        |        |        |        |
| MHz      | dB     | dB/m   | dB             | dBuV   | dBuV/m | dBuV/m | dB     |        |
|          |        |        |                |        |        |        |        |        |
| 2388.637 | 5.47   | 28.52  | 41.17          | 55.48  | 48.30  | 74.00  | -25.70 | peak   |
| 2400.000 |        |        |                |        |        |        |        | •      |
| 2420 000 | 5 51   | 28 56  | <i>I</i> 11 18 | 100 11 | 93 00  | 114 00 | -21 00 | neak   |



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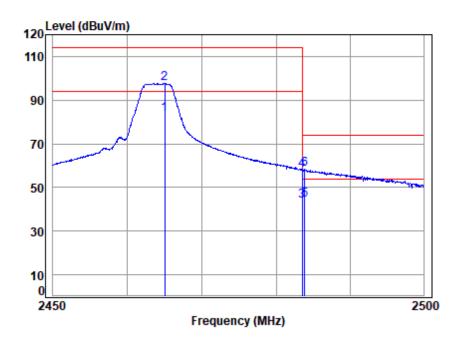
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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 13649CR

Mode : 2465 Band edge

|   |          |       | _      |        |        |        |        |        |         |
|---|----------|-------|--------|--------|--------|--------|--------|--------|---------|
|   |          | Cable | Ant    | Preamp | Read   |        | Limit  | 0ver   |         |
|   | Freq     | Loss  | Factor | Factor | Level  | Level  | Line   | Limit  | Remark  |
|   |          |       |        |        |        |        |        |        |         |
|   | MHz      | dB    | dB/m   | dB     | dBuV   | dBuV/m | dBuV/m | dB     |         |
|   |          |       |        |        |        |        |        |        |         |
| 1 | 2465.000 | 5.57  | 28.64  | 41.20  | 90.32  | 83.33  | 94.00  | -10.67 | Average |
| 2 | 2465.000 | 5.57  | 28.64  | 41.20  | 104.46 | 97.47  | 114.00 | -16.53 | peak    |
| 3 | 2483.500 | 5.60  | 28.67  | 41.21  | 50.72  | 43.78  | 54.00  | -10.22 | Average |
| 4 | 2483.500 | 5.60  | 28.67  | 41.21  | 64.86  | 57.92  | 74.00  | -16.08 | peak    |
| 5 | 2483.890 | 5.60  | 28.67  | 41.21  | 51.20  | 44.26  | 54.00  | -9.74  | Average |
| 6 | 2483 890 | 5 60  | 28 67  | 41 21  | 65 34  | 58 40  | 74 99  | -15 60 | neak    |



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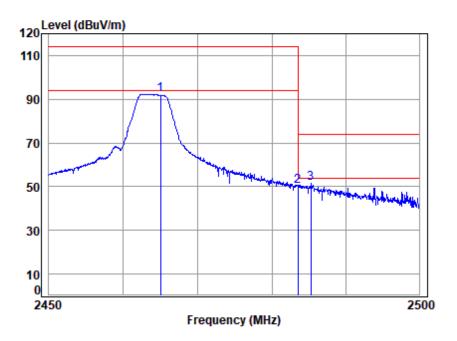
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 13649CR

Mode : 2465 Band edge

| - |          | 05 50 | ~ ~~~  |        |       |        |        |        |        |   |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|---|
|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |   |
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |   |
|   |          |       |        |        |       |        |        |        |        |   |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        | _ |
|   |          |       |        |        |       |        |        |        |        |   |
|   | 2465.000 | 5.57  | 28.64  | 41.20  | 99.37 | 92.38  | 114.00 | -21.62 | peak   |   |
|   | 2483.500 | 5.60  | 28.67  | 41.21  | 57.15 | 50.21  | 74.00  | -23.79 | peak   |   |
|   | 2485.245 | 5.60  | 28.68  | 41.21  | 58.51 | 51.58  | 74.00  | -22.42 | peak   |   |

#### Remark:

1 2 3

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

2) The peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the above measurement data were shown in the report.



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## 7.4 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

ANSI C63.10 (2013) Section 6.4&6.5&6.6 Test Method:

Measurement Distance: 3m

Limit:

| Frequency(MHz) | Field strength (microvolts/meter) | Limit<br>(dBuV/m) | Detector | Measurement Distance (meters) |
|----------------|-----------------------------------|-------------------|----------|-------------------------------|
| 0.009-0.490    | 2400/F(kHz)                       | -                 | -        | 300                           |
| 0.490-1.705    | 24000/F(kHz)                      | -                 | -        | 30                            |
| 1.705-30       | 30                                | -                 | -        | 30                            |
| 30-88          | 100                               | 40.0              | QP       | 3                             |
| 88-216         | 150                               | 43.5              | QP       | 3                             |
| 216-960        | 200                               | 46.0              | QP       | 3                             |
| 960-1000       | 500                               | 54.0              | QP       | 3                             |
| Above 1000     | 500                               | 54.0              | AV       | 3                             |



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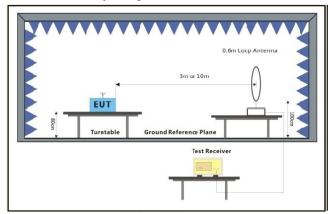
#### 7.4.1 E.U.T. Operation

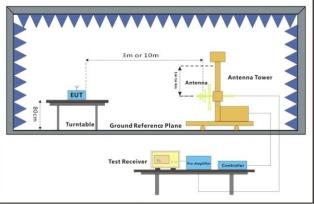
Operating Environment:

22 °C Atmospheric Pressure: 1005 mbar Temperature: Humidity: 55 % RH

Test mode b:TX mode\_Keep the EUT in transmitting with modulation mode.

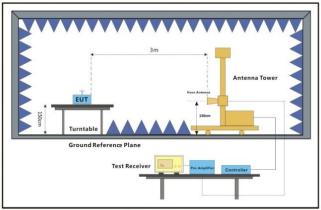
#### 7.4.2 Test Setup Diagram





Below 30MHz

30MHz-1GHz



Above 1GHz



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#### 7.4.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

#### Remark:

- 1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

- 3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
- 4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



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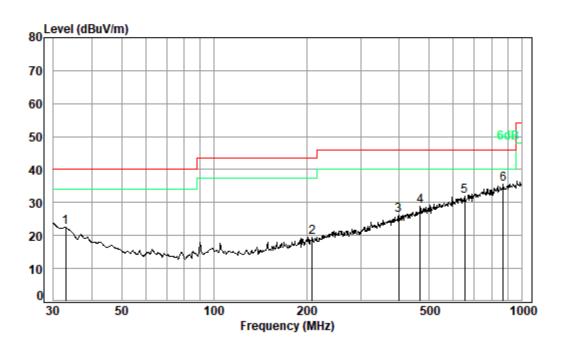
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30MHz~1GHz

QP value:

Mode: b; Polarization: Horizontal



Condition: 3m Horizontal

Job No. : 13649CR

Test mode: b

|      | Freq   |      |       | Preamp<br>Factor |       |        |        |        |
|------|--------|------|-------|------------------|-------|--------|--------|--------|
|      | MHz    | dB   | dB/m  | dB               | dBuV  | dBuV/m | dBuV/m | dB     |
| 1    | 32.86  | 0.60 | 20.92 | 27.66            | 28.73 | 22.59  | 40.00  | -17.41 |
| 2    | 208.58 | 1.45 | 16.81 | 27.53            | 28.81 | 19.54  | 43.50  | -23.96 |
| 3    | 399.03 | 2.20 | 22.38 | 27.73            | 29.28 | 26.13  | 46.00  | -19.87 |
| 4    | 468.88 | 2.49 | 23.97 | 27.84            | 30.38 | 29.00  | 46.00  | -17.00 |
| 5    | 654.23 | 2.81 | 27.33 | 27.62            | 29.57 | 32.09  | 46.00  | -13.91 |
| 6 pp | 872.18 | 3.49 | 29.45 | 27.17            | 29.70 | 35.47  | 46.00  | -10.53 |



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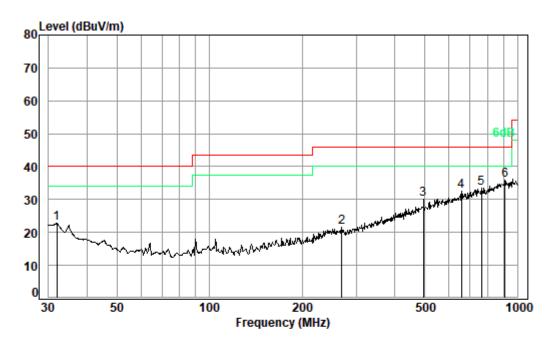
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Mode: b; Polarization: Vertical



Condition: 3m Vertical Job No. : 13649CR

Test mode: b

|      |        | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |
|------|--------|-------|--------|--------|-------|--------|--------|--------|
|      | Freq   | Loss  | Factor | Factor | Level | Level  | Line   | Limit  |
|      |        |       |        |        |       |        |        |        |
|      | MHz    | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |
|      |        |       |        |        |       |        |        |        |
| 1    | 31.95  | 0.60  | 21.40  | 27.66  | 28.44 | 22.78  | 40.00  | -17.22 |
| 2    | 268.49 | 1.76  | 18.97  | 27.54  | 28.33 | 21.52  | 46.00  | -24.48 |
| 3    | 495.93 | 2.59  | 24.52  | 27.87  | 30.75 | 29.99  | 46.00  | -16.01 |
| 4    | 658.84 | 2.82  | 27.39  | 27.61  | 30.01 | 32.61  | 46.00  | -13.39 |
| 5    | 763.38 | 3.10  | 28.29  | 27.47  | 29.61 | 33.53  | 46.00  | -12.47 |
| 6 pp | 912.86 | 3.61  | 29.87  | 27.04  | 29.51 | 35.95  | 46.00  | -10.05 |



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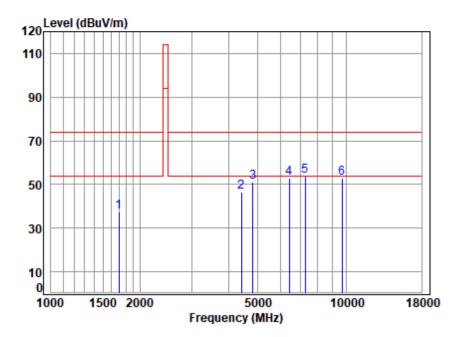


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Above 1GHz

Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 13649CR Mode : 2420 TX RSE

Cable Limit Over Ant Preamp Read Freq Loss Factor Factor Level Level Line Limit Remark dBuV dBuV/m dBuV/m MHz dB dB/m dΒ dB 1697.129 5.23 26.66 40.83 46.37 37.43 74.00 -36.57 peak 1 4417.841 7.47 33.46 43.22 48.72 46.43 74.00 -27.57 peak 2 3 4840.000 7.93 34.01 43.65 52.71 51.00 74.00 -23.00 peak 4 6414.167 11.38 35.52 42.48 48.72 53.14 74.00 -20.86 peak 5 7260.000 10.06 36.11 41.82 49.27 53.62 74.00 -20.38 peak 9680.000 10.78 37.71 38.31 42.95 53.13 74.00 -20.87 peak



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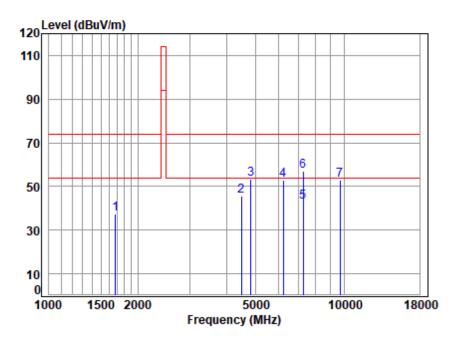
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 13649CR Mode : 2420 TX RSE

|   | Freq     |       |       | Preamp<br>Factor |       |        |        |        | Remark  |
|---|----------|-------|-------|------------------|-------|--------|--------|--------|---------|
|   | MHz      | dB    | dB/m  | dB               | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 1677.621 | 5.25  | 26.58 | 40.82            | 46.42 | 37.43  | 74.00  | -36.57 | peak    |
| 2 | 4495.125 | 7.55  | 33.59 | 43.30            | 47.94 | 45.78  | 74.00  | -28.22 | peak    |
| 3 | 4840.000 | 7.93  | 34.01 | 43.65            | 55.11 | 53.40  | 74.00  | -20.60 | peak    |
| 4 | 6213.441 | 10.99 | 35.32 | 42.64            | 49.14 | 52.81  | 74.00  | -21.19 | peak    |
| 5 | 7260.000 | 10.06 | 36.11 | 41.82            | 38.62 | 42.97  | 54.00  | -11.03 | Average |
| 6 | 7260.000 | 10.06 | 36.11 | 41.82            | 52.76 | 57.11  | 74.00  | -16.89 | peak    |
| 7 | 9680.000 | 10.78 | 37.71 | 38.31            | 42.55 | 52.73  | 74.00  | -21.27 | peak    |



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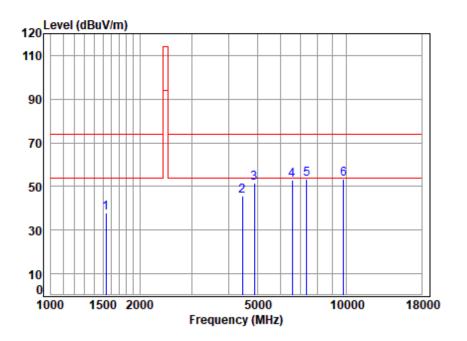
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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

Job No : 13649CR : 2447 TX RSE Mode

> Cable Limit Over Ant Preamp Read Freq Loss Factor Factor Level Level Line Limit Remark dBuV dBuV/m dBuV/m MHz dB dB/m dΒ dB 1533.841 5.44 25.96 40.73 47.30 37.97 74.00 -36.03 peak 4456.315 7.51 33.53 43.26 47.97 45.75 74.00 -28.25 peak 34.08 43.70 53.16 51.52 74.00 -22.48 peak 4894.000 7.98 6564.209 11.35 35.64 42.35 48.25 52.89 74.00 -21.11 peak 7341.000 10.04 36.18 41.76 48.85 53.31 74.00 -20.69 peak 9788.000 10.84 37.77 38.14 42.81 53.28 74.00 -20.72 peak



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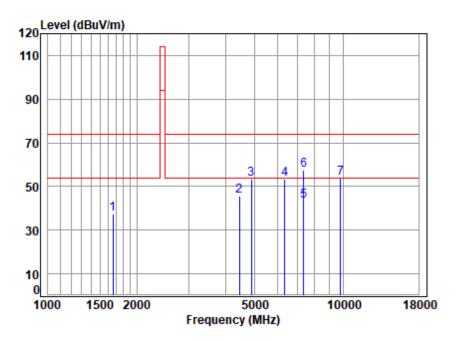
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:middle



Site : chamber Condition: 3m VERTICAL Job No : 13649CR Mode : 2447 TX RSE

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |         |
|---|----------|-------|--------|--------|-------|--------|--------|--------|---------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark  |
|   |          |       |        |        |       |        |        |        |         |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |         |
|   |          |       |        |        |       |        |        |        |         |
| 1 | 1663.137 | 5.27  | 26.52  | 40.81  | 46.34 | 37.32  | 74.00  | -36.68 | peak    |
| 2 | 4456.315 | 7.51  | 33.53  | 43.26  | 47.88 | 45.66  | 74.00  | -28.34 | peak    |
| 3 | 4894.000 | 7.98  | 34.08  | 43.70  | 54.97 | 53.33  | 74.00  | -20.67 | peak    |
| 4 | 6340.436 | 11.24 | 35.44  | 42.54  | 49.05 | 53.19  | 74.00  | -20.81 | peak    |
| 5 | 7341.000 | 10.04 | 36.18  | 41.76  | 38.84 | 43.30  | 54.00  | -10.70 | Average |
| 6 | 7341.000 | 10.04 | 36.18  | 41.76  | 53.04 | 57.50  | 74.00  | -16.50 | peak    |
| 7 | 9788.000 | 10.84 | 37.77  | 38.14  | 43.16 | 53.63  | 74.00  | -20.37 | peak    |
|   |          |       |        |        |       |        |        |        |         |



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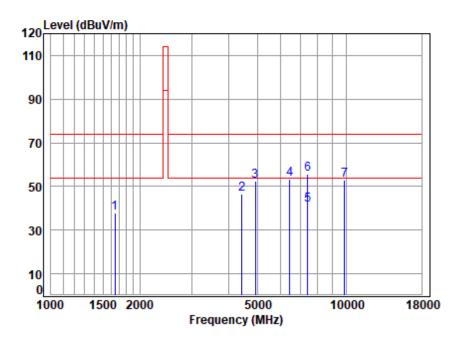
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Mode:b; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 13649CR Mode : 2465 TX RSE

|   | Freq     |       |       | Preamp<br>Factor |       |        |        |        | Remark  |
|---|----------|-------|-------|------------------|-------|--------|--------|--------|---------|
|   | MHz      | dB    | dB/m  | dB               | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 1648.778 | 5.29  | 26.46 | 40.80            | 46.95 | 37.90  | 74.00  | -36.10 | peak    |
| 2 | 4430.628 | 7.48  | 33.48 | 43.23            | 48.79 | 46.52  | 74.00  | -27.48 | peak    |
| 3 | 4930.000 | 8.02  | 34.12 | 43.73            | 54.15 | 52.56  | 74.00  | -21.44 | peak    |
| 4 | 6432.732 | 11.41 | 35.54 | 42.46            | 48.76 | 53.25  | 74.00  | -20.75 | peak    |
| 5 | 7395.000 | 10.03 | 36.22 | 41.72            | 36.77 | 41.30  | 54.00  | -12.70 | Average |
|   | 7395.000 |       |       |                  |       |        |        |        | _       |
| 7 | 9860 000 | 10 87 | 37 82 | 38 02            | 42 18 | 52 85  | 74 00  | -21 15 | neak    |



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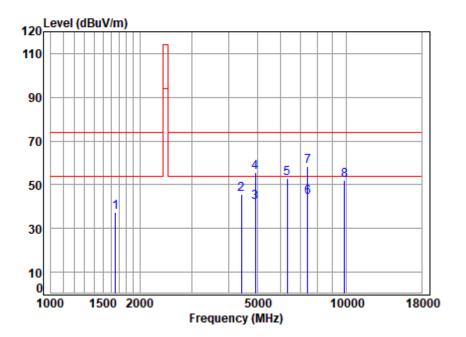
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Mode:b; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 13649CR Mode : 2465 TX RSE

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |         |
|---|----------|-------|--------|--------|-------|--------|--------|--------|---------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark  |
|   |          |       |        |        |       |        |        |        |         |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |         |
|   |          |       | •      |        |       |        |        |        |         |
| 1 | 1653.550 | 5.28  | 26.48  | 40.80  | 46.37 | 37.33  | 74.00  | -36.67 | peak    |
| 2 | 4417.841 | 7.47  | 33.46  | 43.22  | 47.90 | 45.61  | 74.00  | -28.39 | peak    |
| 3 | 4930.000 | 8.02  | 34.12  | 43.73  | 43.34 | 41.75  | 54.00  | -12.25 | Average |
| 4 | 4930.000 | 8.02  | 34.12  | 43.73  | 57.48 | 55.89  | 74.00  | -18.11 | peak    |
| 5 | 6322.136 | 11.20 | 35.43  | 42.55  | 48.66 | 52.74  | 74.00  | -21.26 | peak    |
| 6 | 7395.000 | 10.03 | 36.22  | 41.72  | 39.93 | 44.46  | 54.00  | -9.54  | Average |
| 7 | 7395.000 | 10.03 | 36.22  | 41.72  | 54.07 | 58.60  | 74.00  | -15.40 | peak    |
| 8 | 9860.000 | 10.87 | 37.82  | 38.02  | 41.33 | 52.00  | 74.00  | -22.00 | peak    |
|   |          |       |        |        |       |        |        |        | •       |



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#### **Photographs** 8

## 8.1 Test Setup

Refer to Setup Photos

## 8.2 EUT Constructional Details (EUT Photos)

Refer to EUT external and internal photos

- End of the Report -



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