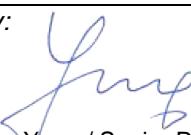
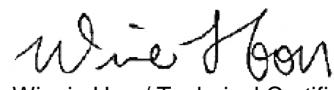


| <b>Prüfbericht-Nr.:</b><br><i>Test report No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                         | 50052573 001                                                                                                                                                                                                                                                                | <b>Auftrags-Nr.:</b><br><i>Order No.:</i>                                                                                | 164067080                                                                             | Seite 1 von 27<br><i>Page 1 of 27</i> |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------|----------------------------------|
| <b>Kunden-Referenz-Nr.:</b><br><i>Client reference No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                | N/A                                                                                                                                                                                                                                                                         | <b>Auftragsdatum:</b><br><i>Order date.:</i>                                                                             | 23.06.2016                                                                            |                                       |                                  |
| <b>Auftraggeber:</b><br><i>Client:</i>                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>THAMES &amp; KOSMOS, LLC.</b><br>301 Friendship Street, Providence, Rhode Island 02903, United States                                                                                                                                                                    |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüfgegenstand:</b><br><i>Test item:</i>                                                                                                                                                                                                                                                                                                                                                                                                                | Kosmobits / Code Gamer                                                                                                                                                                                                                                                      |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Bezeichnung / Typ-Nr.:</b><br><i>Identification / Type No.:</i>                                                                                                                                                                                                                                                                                                                                                                                         | 620141<br>(KOSMOS)                                                                                                                                                                                                                                                          |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Auftrags-Inhalt:</b><br><i>Order content:</i>                                                                                                                                                                                                                                                                                                                                                                                                           | FCC and IC approval                                                                                                                                                                                                                                                         |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüfgrundlage:</b><br><i>Test specification:</i>                                                                                                                                                                                                                                                                                                                                                                                                        | CFR47 FCC Part 15: Subpart C Section 15.247<br>CFR47 FCC Part 15: Subpart C Section 15.207<br>CFR47 FCC Part 15: Subpart C Section 15.209<br>CFR47 FCC Part 15: Subpart B Section 15.107<br>CFR47 FCC Part 15: Subpart B Section 15.109<br>CFR47 FCC Part 2: Section 2.1093 | RSS-247 Issue 1 May 2015<br>RSS-Gen Issue 4 November 2014<br>ICES-003 Issue 6 January 2016<br>RSS-102 Issue 5 March 2015 |                                                                                       |                                       |                                  |
| <b>Wareneingangsdatum:</b><br><i>Date of receipt:</i>                                                                                                                                                                                                                                                                                                                                                                                                      | 23.06.2016                                                                                                                                                                                                                                                                  | Please refer to photo documents                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüfmuster-Nr.:</b><br><i>Test sample No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                          | A000377748-007<br>A000377748-010                                                                                                                                                                                                                                            |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüfzeitraum:</b><br><i>Testing period:</i>                                                                                                                                                                                                                                                                                                                                                                                                             | 01.07.2016 - 31.07.2016                                                                                                                                                                                                                                                     |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Ort der Prüfung:</b><br><i>Place of testing:</i>                                                                                                                                                                                                                                                                                                                                                                                                        | Accurate Technology Co., Ltd.                                                                                                                                                                                                                                               |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüflaboratorium:</b><br><i>Testing laboratory:</i>                                                                                                                                                                                                                                                                                                                                                                                                     | TÜV Rheinland (Shenzhen)<br>Co., Ltd.                                                                                                                                                                                                                                       |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Prüfergebnis*:</b><br><i>Test result*:</i>                                                                                                                                                                                                                                                                                                                                                                                                              | Pass                                                                                                                                                                                                                                                                        |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>geprüft von / tested by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                          | <b>kontrolliert von / reviewed by:</b>                                                                                   |  |                                       |                                  |
| 18.09.2016                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Ryan Yang / Senior Project Engineer                                                                                                                                                                                                                                         | 18.09.2016                                                                                                               | Winnie Hou / Technical Certifier                                                      |                                       |                                  |
| Datum<br><i>Date</i>                                                                                                                                                                                                                                                                                                                                                                                                                                       | Name/Stellung<br><i>Name/Position</i>                                                                                                                                                                                                                                       | Unterschrift<br><i>Signature</i>                                                                                         | Datum<br><i>Date</i>                                                                  | Name/Stellung<br><i>Name/Position</i> | Unterschrift<br><i>Signature</i> |
| <b>Sonstiges / Other:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                             |                                                                                                                          |                                                                                       |                                       |                                  |
| FCC ID: 2AIAE-620141<br>IC: 21634-620141<br>HVIN: 620141-00                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                             |                                                                                                                          |                                                                                       |                                       |                                  |
| NOTE: Kosmobits is German model, and Code Gamer is US model, just for different markets.                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                             |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br><i>Condition of the test item at delivery:</i>                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                             |                                                                                                                          | Prüfmuster vollständig und unbeschädigt<br><i>Test item complete and undamaged:</i>   |                                       |                                  |
| * Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft<br>P(ass) = entspricht o.g. Prüfgrundlage(n) F(fail) = entspricht nicht o.g. Prüfgrundlage(n)<br>Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor<br>P(ass) = passed a.m. test specifications(s) F(fail) = failed a.m. test specifications(s)<br>N/A = nicht anwendbar N/T = nicht getestet<br>N/A = not applicable N/T = not tested                |                                                                                                                                                                                                                                                                             |                                                                                                                          |                                                                                       |                                       |                                  |
| <b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b><br><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i> |                                                                                                                                                                                                                                                                             |                                                                                                                          |                                                                                       |                                       |                                  |

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## ***Test Summary***

**5.1.1 ANTENNA REQUIREMENT**  
*RESULT:* Pass

**5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER**  
*RESULT:* Pass

**5.1.3 CONDUCTED POWER SPECTRAL DENSITY**  
*RESULT:* Pass

**5.1.4 6dB BANDWIDTH**  
*RESULT:* Pass

**5.1.5 99% BANDWIDTH**  
*RESULT:* Pass

**5.1.6 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH**  
*RESULT:* Pass

**5.1.7 RADIATED SPURIOUS EMISSION**  
*RESULT:* Pass

**5.1.8 CONDUCTED EMISSION ON AC MAINS**  
*RESULT:* Pass

**5.1.9 RADIATED EMISSION**  
*RESULT:* Pass

**6.1.1 ELECTROMAGNETIC FIELDS**  
*RESULT:* Pass

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## 1 General Remarks

### 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Bluetooth 4.0 Low Energy of Conducted Testing

Appendix B: Test Results of Bluetooth 4.0 Low Energy of Conducted and Radiated Emission Testing

## 2 Test Sites

### 2.1 Test Facilities

**Accurate Technology Co., Ltd.**

F1, Bldg. A, Changyuan New Material Port Keyuan Rd., Science & Industry Park, Nanshan Shenzhen,  
518057, P.R. China

FCC Registration No.: 752051

Test site Industry Canada No.: 5077A-2

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**
**Accurate Technology Co., Ltd.**

| <b>Radio Spectrum Test</b>                       |                      |                    |                   |                   |
|--------------------------------------------------|----------------------|--------------------|-------------------|-------------------|
| <b>Equipment</b>                                 | <b>Manufacturer</b>  | <b>Model No.</b>   | <b>Serial No.</b> | <b>Cal. Until</b> |
| Spectrum Analyzer                                | R&S                  | ESPI3              | 100396/003        | 09.01.2017        |
| <b>Spurious Emission &amp; Radiated Emission</b> |                      |                    |                   |                   |
| <b>Equipment</b>                                 | <b>Manufacturer</b>  | <b>Model No.</b>   | <b>Serial No.</b> | <b>Cal. Until</b> |
| Spectrum Analyzer                                | R&S                  | FSV40              | 101495            | 01.01.2017        |
| Test Receiver                                    | R&S                  | ESCS30             | 100307            | 01.01.2017        |
| Bilog Antenna                                    | Schwarzbeck          | VULB9163           | 9163-323          | 01.01.2017        |
| Loop Antenna                                     | Schwarzbeck          | FMZB1516           | 1516131           | 01.01.2017        |
| Horn Antenna                                     | Schwarzbeck          | BBHA9120D          | 9120D-655         | 01.01.2017        |
| Horn Antenna                                     | Schwarzbeck          | BBHA9170           | 9170-359          | 01.01.2017        |
| RF Switching Unit+PreAMP                         | Compliance Direction | RSU-M2             | 38322             | 01.01.2017        |
| Pre-Amplifier                                    | R&S                  | CBLU11835<br>40-01 | 3791              | 01.01.2017        |
| 50 Coaxial Switch                                | Anritsu Corp         | MP59B              | 6200506474        | 01.01.2017        |
| RF Coaxial Cable                                 | SUHNER               | N-3m               | No.8              | 01.01.2017        |
| RF Coaxial Cable                                 | RESENBERGER          | N-3.5m             | No.9              | 01.01.2017        |
| RF Coaxial Cable                                 | SUHNER               | N-6m               | No.10             | 01.01.2017        |
| RF Coaxial Cable                                 | RESENBERGER          | N-12m              | No.11             | 01.01.2017        |
| 50_ Coaxial Switch                               | Anritsu Corp         | MP59B              | 6200283933        | 09.01.2017        |
| <b>Conducted Emission on AC Mains</b>            |                      |                    |                   |                   |
| <b>Equipment</b>                                 | <b>Manufacturer</b>  | <b>Model No.</b>   | <b>Serial No.</b> | <b>Cal. Until</b> |
| Test Receiver                                    | R&S                  | ESCI               | 26115-010-0027    | 17.05.2017        |
| L.I.S.N.                                         | R&S                  | ENV216             | 101161            | 17.05.2017        |
| 50Ω Coaxial Switch                               | Anritsu              | MP59B              | 6100175589        | 17.05.2017        |

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

| Item                              | Extended Uncertainty          |                                     |
|-----------------------------------|-------------------------------|-------------------------------------|
| Conducted Emission                | $\pm 2.0 \text{ dB}$          |                                     |
| Radiated Emission (9kHz-30MHz)    | Field strength (dB $\mu$ V/m) | $U=3.08\text{dB}, k=2, \sigma=95\%$ |
| Radiated Emission (30-1000MHz)    | Field strength (dB $\mu$ V/m) | $U=4.42\text{dB}, k=2, \sigma=95\%$ |
| Radiated Emission (above 1000MHz) | Field strength (dB $\mu$ V/m) | $U=4.06\text{dB}, k=2, \sigma=95\%$ |
| Radio Spectrum                    | $\pm 0.60 \text{ dB}$         |                                     |

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The Accurate Technology Co., Ltd. Test facility located at F1, Bldg. A, Changyuan New Material Port Keyuan Rd., Science & Industry Park, Nanshan Shenzhen, 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

## 3 General Product Information

### 3.1 Product Function and Intended Use

The EUT is a 'Kosmobits / Code Gamer' device. It supports Bluetooth 4.0 Low Energy wireless technology.

According to the declaration of the applicant, the electrical circuit design, PCB layout and components used are identical for Kosmobits and Code Gamer, the only difference is language of manuals and outer box.

For details refer to the User Manual, Technical Description and Circuit Diagram.

### 3.2 Ratings and System Details

Table 2: Technical Specification of EUT

| Technical Specification     | Value                                                                     |
|-----------------------------|---------------------------------------------------------------------------|
| Kind of Equipment           | Kosmobits / Code Gamer                                                    |
| Type Designation            | 620141                                                                    |
| Trade Mark                  | KOSMOS                                                                    |
| FCC ID                      | 2AIAE-620141                                                              |
| IC                          | 21634-620141                                                              |
| HVIN                        | 620141-00                                                                 |
| Operating Frequency         | 2402 - 2480 MHz                                                           |
| Operating Temperature Range | -20 °C ~ +85 °C                                                           |
| Operating Voltage           | DC 3.7V via internal rechargeable lithium battery<br>DC 5.0V via USB port |
| Testing Voltage             | DC 3.7V via internal rechargeable lithium battery<br>DC 5.0V via USB port |
| Type of Modulation          | GFSK                                                                      |
| Channel Number              | 40 channels                                                               |
| Channel Separation          | 2 MHz                                                                     |
| Wireless Technology         | Bluetooth 4.0 Low Energy                                                  |
| Antenna Type                | Chip Antenna                                                              |
| Antenna Gain                | 0.00 dBi                                                                  |

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**Table 3: RF Channel and Frequency of Bluetooth Low Energy**

| RF Channel | Frequency (MHz) |
|------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|
| <b>00</b>  | <b>2402.00</b>  | 10         | 2422.00         | 20         | 2442.00         | 30         | 2462.00         |
| 01         | 2404.00         | 11         | 2424.00         | 21         | 2444.00         | 31         | 2464.00         |
| 02         | 2406.00         | 12         | 2426.00         | 22         | 2446.00         | 32         | 2466.00         |
| 03         | 2408.00         | 13         | 2428.00         | 23         | 2448.00         | 33         | 2468.00         |
| 04         | 2410.00         | 14         | 2430.00         | 24         | 2450.00         | 34         | 2470.00         |
| 05         | 2412.00         | 15         | 2432.00         | 25         | 2452.00         | 35         | 2472.00         |
| 06         | 2414.00         | 16         | 2434.00         | 26         | 2454.00         | 36         | 2474.00         |
| 07         | 2416.00         | 17         | 2436.00         | 27         | 2456.00         | 37         | 2476.00         |
| 08         | 2418.00         | 18         | 2438.00         | 28         | 2458.00         | 38         | 2478.00         |
| 09         | 2420.00         | <b>19</b>  | <b>2440.00</b>  | 29         | 2460.00         | <b>39</b>  | <b>2480.00</b>  |

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth transmitting mode
  - 1. Low Channel
  - 2. Middle Channel
  - 3. High Channel
- B. On, Bluetooth connecting mode
- C. On, Charging mode
- D. Off

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

### 3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Model Difference Letter
- Operation Description
- Photo Document
- Schematics
- User Manual

## 4 Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014

According to clause 3.1, all tests were performed on model 620141 in this report.

### 4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

| Description | Manufacturer | Model         | S/N | Rating |
|-------------|--------------|---------------|-----|--------|
| Notebook PC | Lenovo       | ThinkPad X240 | N/A | N/A    |

### 4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

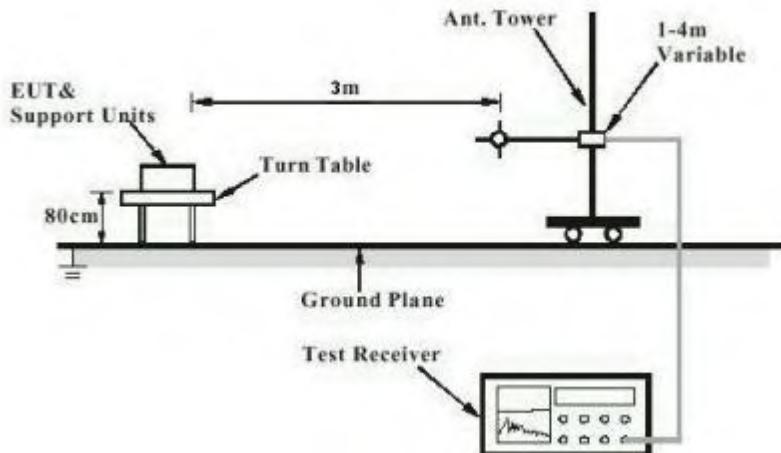
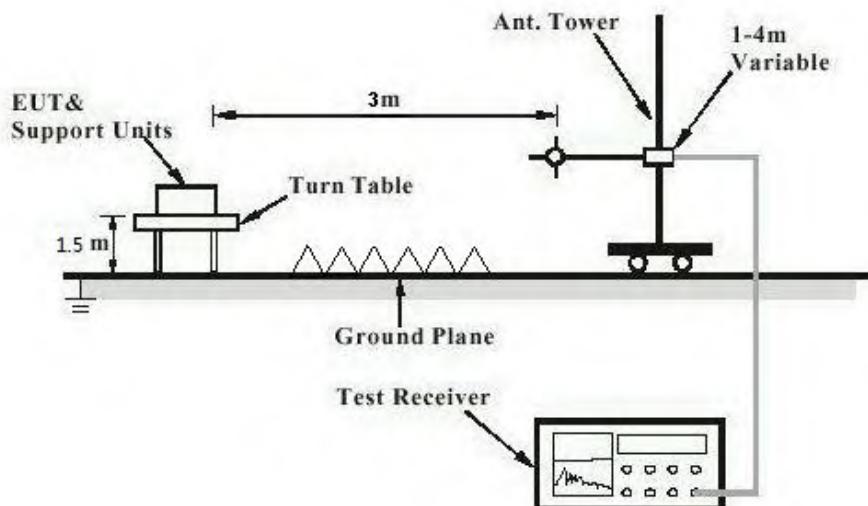


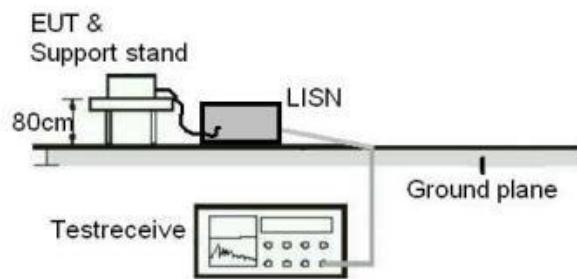
Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



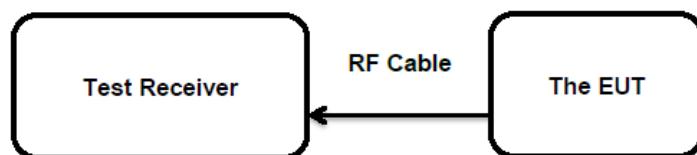
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**Diagram of Measurement Configuration for Mains Conduction Measurement**



**Diagram of Measurement Configuration for Conducted Transmitter Measurement**



## 5 Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**RESULT:** Pass

##### Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0.00 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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## 5.1.2 Maximum Peak Conducted Output Power

**RESULT:**
**Pass**
**Test Specification**

|                   |   |                                                |
|-------------------|---|------------------------------------------------|
| Test standard     | : | FCC Part 15.247(b)(3)<br>RSS-247 Clause 5.4(4) |
| Basic standard    | : | ANSI C63.10: 2013                              |
| Limits            | : | 1.0 Watts                                      |
| Kind of test site | : | Shielded Room                                  |

**Test Setup**

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 01.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | A                                                 |
| Test channel         | : | Low / Middle / High                               |
| Ambient temperature  | : | 25 °C                                             |
| Relative humidity    | : | 56 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

**Table 5: Test Result of Maximum Peak Conducted Output Power, Low Energy**

| Test Mode                     | Channel Frequency (MHz) | Measured Peak Output Power |         | Limit (W) |
|-------------------------------|-------------------------|----------------------------|---------|-----------|
|                               |                         | (dBm)                      | (W)     |           |
| Low Energy                    | 2402                    | -5.97                      | 0.00025 | < 1.0     |
|                               | 2440                    | -7.67                      | 0.00017 |           |
|                               | 2480                    | -9.75                      | 0.00011 |           |
| <b>Maximum Measured Value</b> |                         | -5.97                      | 0.00025 |           |

Note: The cable loss 1.0 dB is taken into account in results.

For the measurement records, refer to the appendix A.

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### 5.1.3 Conducted Power Spectral Density

**RESULT:**

**Pass**

#### Test Specification

|                   |   |                                             |
|-------------------|---|---------------------------------------------|
| Test standard     | : | FCC Part 15.247(e)<br>RSS-247 Clause 5.2(2) |
| Basic standard    | : | ANSI C63.10: 2013                           |
| Limits            | : | 8 dBm/3kHz                                  |
| Kind of test site | : | Shielded Room                               |

#### Test Setup

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 01.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | A                                                 |
| Test channel         | : | Low / Middle / High                               |
| Ambient temperature  | : | 25 °C                                             |
| Relative humidity    | : | 56 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

**Table 6: Test Result of Power Spectral Density, Low Energy**

| Test Mode                     | Test Channel (MHz) | Power Spectrum Density(dBm/3kHz) | Limit (dBm/3kHz) |
|-------------------------------|--------------------|----------------------------------|------------------|
| Low Energy                    | 2402               | -20.38                           | < 8.0            |
|                               | 2440               | -22.13                           |                  |
|                               | 2480               | -24.02                           |                  |
| <b>Maximum Measured Value</b> |                    | -20.38                           |                  |

Note: The cable loss 1.0 dB is taken into account in results.

For the measurement records, refer to the appendix A.

**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*

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### 5.1.4 6dB Bandwidth

**RESULT:**

**Pass**

**Test Specification**

|                   |   |                       |
|-------------------|---|-----------------------|
| Test standard     | : | FCC Part 15.247(a)(2) |
|                   |   | RSS-247 Clause 5.2(1) |
| Basic standard    | : | ANSI C63.10: 2013     |
| Limits            | : | More than 500 KHz     |
| Kind of test site | : | Shielded Room         |

**Test Setup**

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 01.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | A                                                 |
| Test channel         | : | Low / Middle / High                               |
| Ambient temperature  | : | 25 °C                                             |
| Relative humidity    | : | 56 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

**Table 7: Test Result of 6dB Bandwidth, Low Energy**

| Test Mode                     | Test Channel (MHz) | -6dB Bandwidth (kHz) | Limit (kHz) |
|-------------------------------|--------------------|----------------------|-------------|
| Low Energy                    | 2402               | 716.30               | > 500       |
|                               | 2440               | 716.30               |             |
|                               | 2480               | 720.70               |             |
| <b>Minimum Measured Value</b> |                    | 716.30               |             |

For the measurement records, refer to the appendix A.

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*Test Report No.*Seite 17 von 27  
Page 17 of 27**5.1.5 99% Bandwidth****RESULT:****Pass****Test Specification**

Test standard : RSS-Gen Clause 6.6  
Basic standard : ANSI C63.10: 2013  
Kind of test site : Shielded Room

**Test Setup**

Date of testing : 01.07.2016  
Input voltage : DC 3.7V via internal rechargeable lithium battery  
Operation mode : A  
Test channel : Low / Middle / High  
Ambient temperature : 25 °C  
Relative humidity : 56 %  
Atmospheric pressure : 101 kPa

**Table 8: Test Result of 99% Bandwidth, Low Energy**

| Test Mode                     | Channel Frequency (MHz) | 99% Bandwidth (kHz) | Limit (kHz) |
|-------------------------------|-------------------------|---------------------|-------------|
| Low Energy                    | 2402                    | 1089.72             | /           |
|                               | 2440                    | 1085.98             |             |
|                               | 2480                    | 1085.98             |             |
| <b>Maximum Measured Value</b> |                         | 1089.72             |             |

For the measurement records, refer to the appendix A.

**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*Seite 18 von 27  
Page 18 of 27**5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth****RESULT:****Pass****Test Specification**

|                   |   |                                                                                                                 |
|-------------------|---|-----------------------------------------------------------------------------------------------------------------|
| Test standard     | : | FCC Part 15.247(d)<br>RSS-247 Clause 5.5                                                                        |
| Basic standard    | : | ANSI C63.10: 2013                                                                                               |
| Limits            | : | 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); |
| Kind of test site | : | Shielded Room                                                                                                   |

**Test Setup**

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 01.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | A                                                 |
| Test channel         | : | Low / Middle / High                               |
| Ambient temperature  | : | 25 °C                                             |
| Relative humidity    | : | 56 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test plot, and compliance is achieved as well.

For the measurement records, refer to the appendix A.

**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*Seite 19 von 27  
Page 19 of 27**5.1.7 Radiated Spurious Emission****RESULT:** Pass**Test Specification**

|                   |   |                                                                       |
|-------------------|---|-----------------------------------------------------------------------|
| Test standard     | : | FCC Part 15.247(d) & FCC Part 15.205<br>RSS-247 Clause 3.3            |
| Basic standard    | : | ANSI C63.10: 2013                                                     |
| Limits            | : | Refer to 15.209(a) of FCC part 15.247(d)<br>RSS-Gen Table 4 & Table 5 |
| Kind of test site | : | 3m Semi-anechoic Chamber                                              |

**Test Setup**

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 03.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | A                                                 |
| Test channel         | : | Low / Middle / High                               |
| Ambient temperature  | : | 24 °C                                             |
| Relative humidity    | : | 48 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

## Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test set-up photos.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For the measurement records, refer to the appendix B.

**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*Seite 20 von 27  
Page 20 of 27**5.1.8 Conducted Emission on AC Mains****RESULT:** Pass**Test Specification**

|                   |                                                                                 |
|-------------------|---------------------------------------------------------------------------------|
| Test standard     | : FCC Part 15.207(a) & FCC Part 15.107(a)<br>RSS-Gen Clause 8.8 & ICES-003      |
| Basic standard    | : ANSI C63.10: 2013 & ANSI C63.4: 2014                                          |
| Frequency range   | : 0.15 – 30MHz                                                                  |
| Limits            | : FCC Part 15.207(a) & FCC Part 15.107(a)<br>RSS-Gen Table 3 & ICES-003 Table 2 |
| Kind of test site | : Shielded Room                                                                 |

**Test Setup**

|                      |                        |
|----------------------|------------------------|
| Date of testing      | : 31.07.2016           |
| Input voltage        | : DC 5.0V via USB port |
| Operation mode       | : B, C                 |
| Earthing             | : Not connected        |
| Ambient temperature  | : 25 °C                |
| Relative humidity    | : 56 %                 |
| Atmospheric pressure | : 101 kPa              |

For the measurement records, refer to the appendix B.

**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*Seite 21 von 27  
Page 21 of 27**5.1.9 Radiated Emission****RESULT:** Pass**Test Specification**

|                   |   |                                                  |
|-------------------|---|--------------------------------------------------|
| Test standard     | : | FCC Part 15.109(a)<br>ICES-003                   |
| Basic standard    | : | ANSI C63.4: 2014                                 |
| Frequency range   | : | 30 - 6000MHz                                     |
| Classification    | : | Class B                                          |
| Limits            | : | FCC Part 15.109(a)<br>ICES-003 Table 5 & Table 7 |
| Kind of test site | : | 3m Semi-anechoic Chamber                         |

**Test Setup**

|                      |   |                                                   |
|----------------------|---|---------------------------------------------------|
| Date of testing      | : | 27.07.2016                                        |
| Input voltage        | : | DC 3.7V via internal rechargeable lithium battery |
| Operation mode       | : | C                                                 |
| Earthing             | : | Not connected                                     |
| Ambient temperature  | : | 24 °C                                             |
| Relative humidity    | : | 48 %                                              |
| Atmospheric pressure | : | 101 kPa                                           |

For the measurement records, refer to the appendix B.

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*Test Report No.*

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## 6 Safety Human Exposure

### 6.1 Radio Frequency Exposure Compliance

#### 6.1.1 Electromagnetic Fields

**RESULT:**

**Pass**

##### **Test Specification**

Test standard : CFR47 FCC Part 2: Section 2.1093  
FCC KDB Publication 447498 D01 v06  
RSS-102 Issue 5 March 2015

##### **Measurement Record:**

The minimum distance for the EUT is less than 5mm.

Since maximum peak output power of the transmitter is  $-5.97 \text{ dBm} \approx 0.25 \text{ mW} < \frac{3^*d}{\sqrt{f}} = 9.52 \text{ mW}$ .

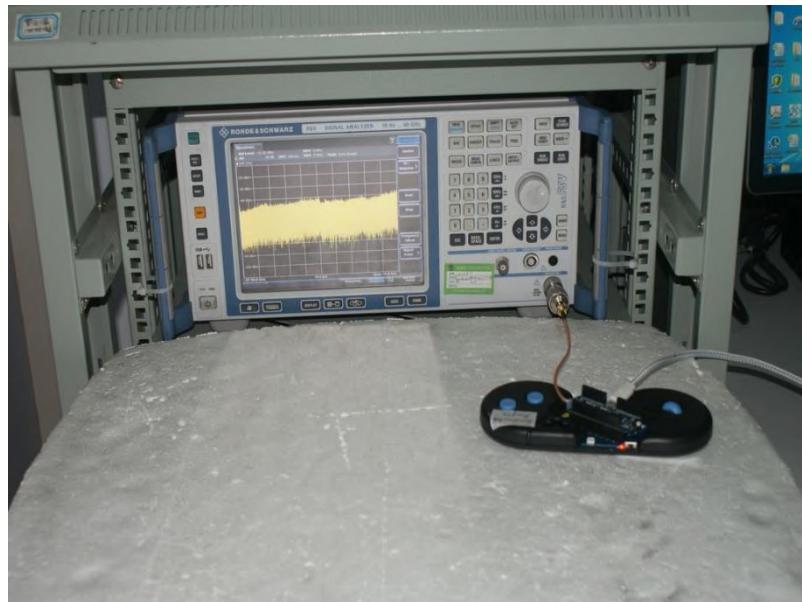
Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v06.

The maximum peak output power of the transmitter is  $-5.97 \text{ dBm}$  ( $0.25 \text{ mW}$ ), which is far below the SAR exclusion threshold level  $4 \text{ mW} \approx 6.02 \text{ dBm}$ .

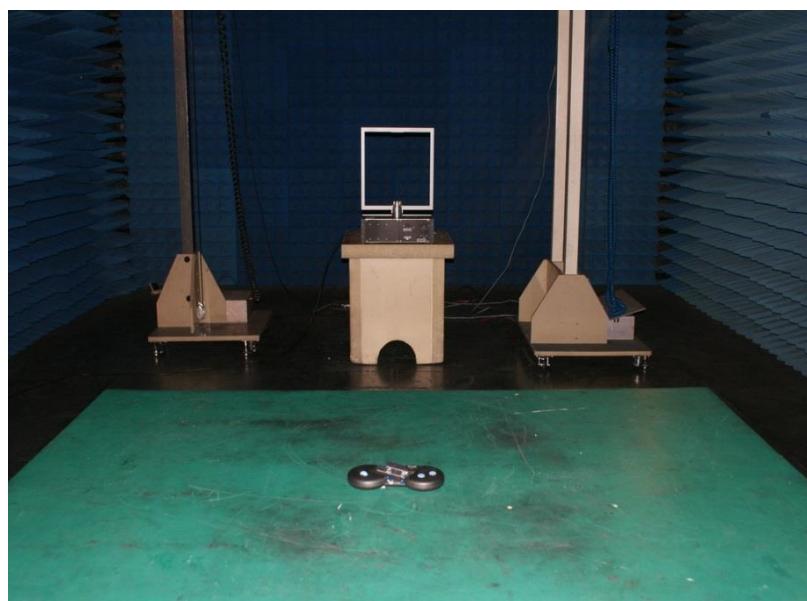
Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 5.

## 7 Photographs of the Test Set-Up

Photograph 1: Set-up for Radio Spectrum Test



Photograph 2: Set-up for Radiated Spurious Emission (9kHz ~ 30MHz)



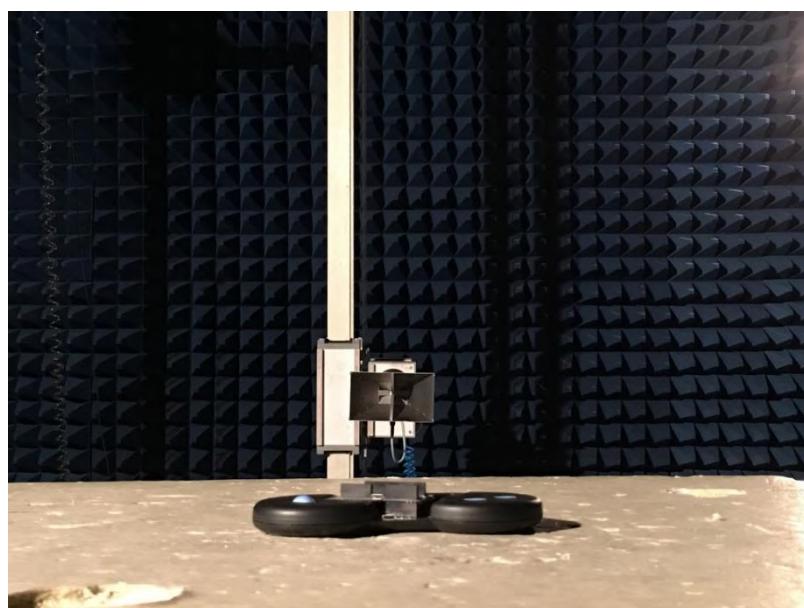
**Prüfbericht - Nr.: 50052573 001**  
*Test Report No.*

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**Photograph 3: Set-up for Radiated Spurious Emission (30MHz~1GHz)**



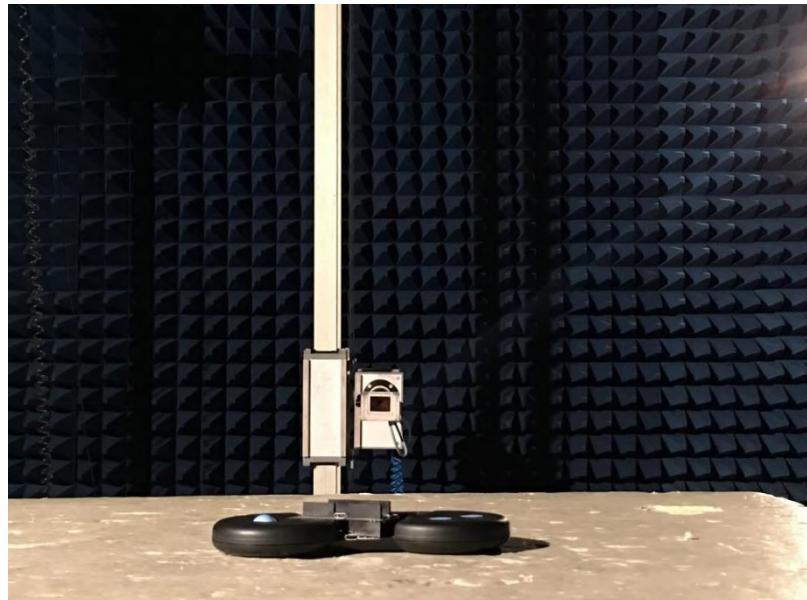
**Photograph 4: Set-up for Radiated Spurious Emission (1GHz ~ 18GHz)**



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**Photograph 5: Set-up for Radiated Spurious Emission (18GHz ~ 26GHz)**



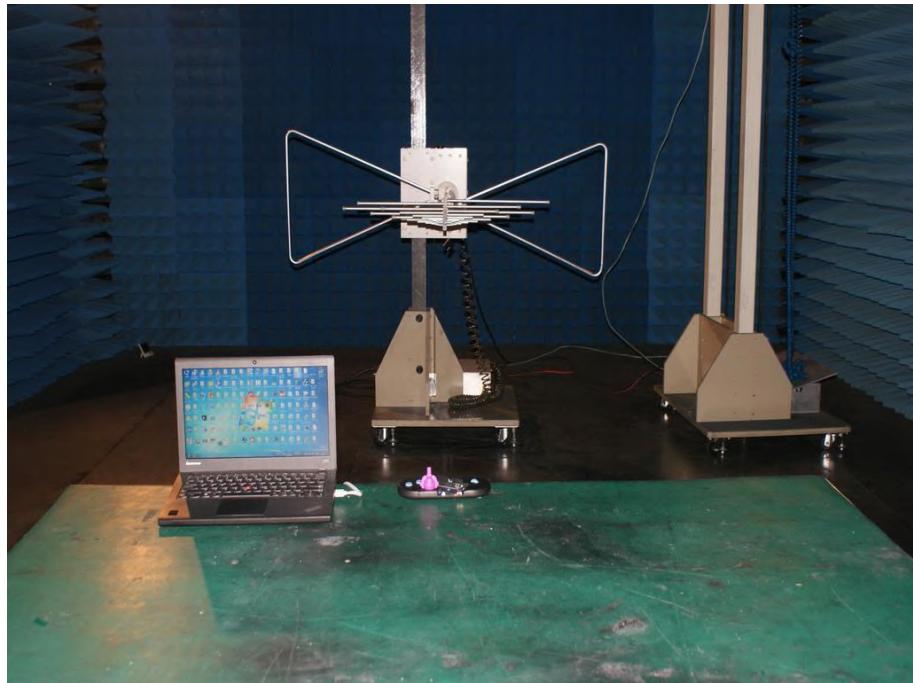
**Photograph 6: Set-up for Conducted Emission on AC Mains**



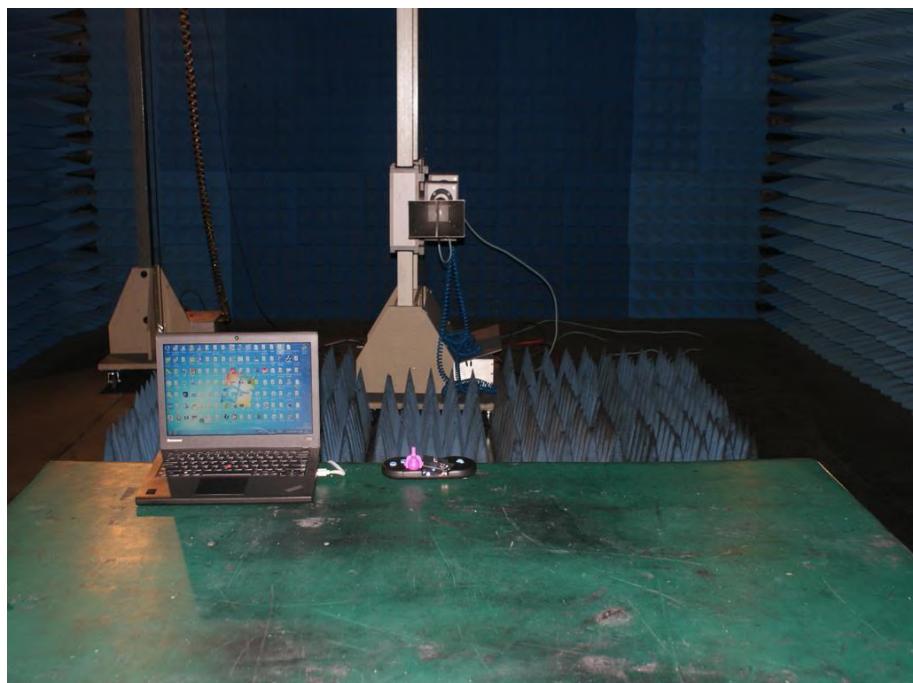
**Prüfbericht - Nr.: 50052573 001**  
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**Photograph 7: Set-up for Radiated Emission (30MHz ~ 1GHz)**



**Photograph 8: Set-up for Radiated Emission (1GHz ~ 6GHz)**



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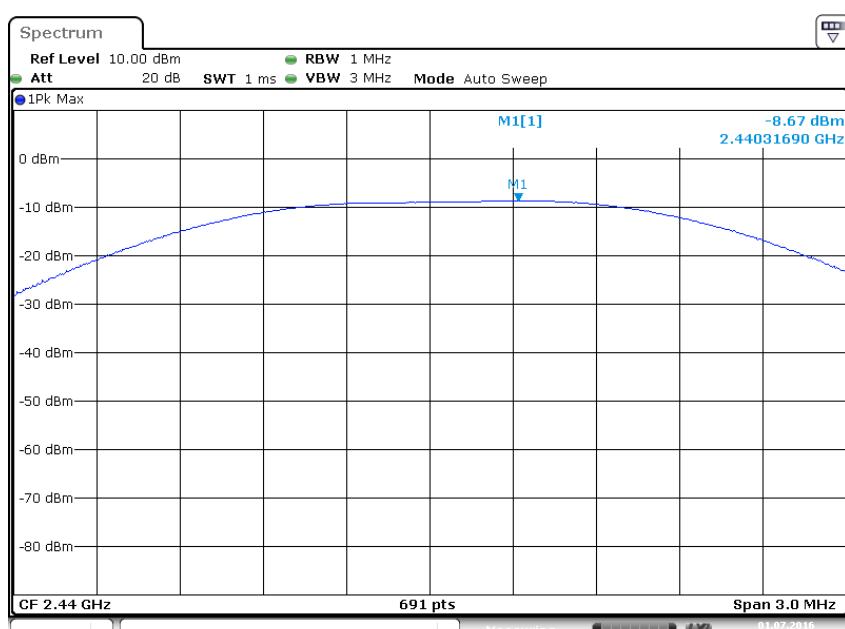
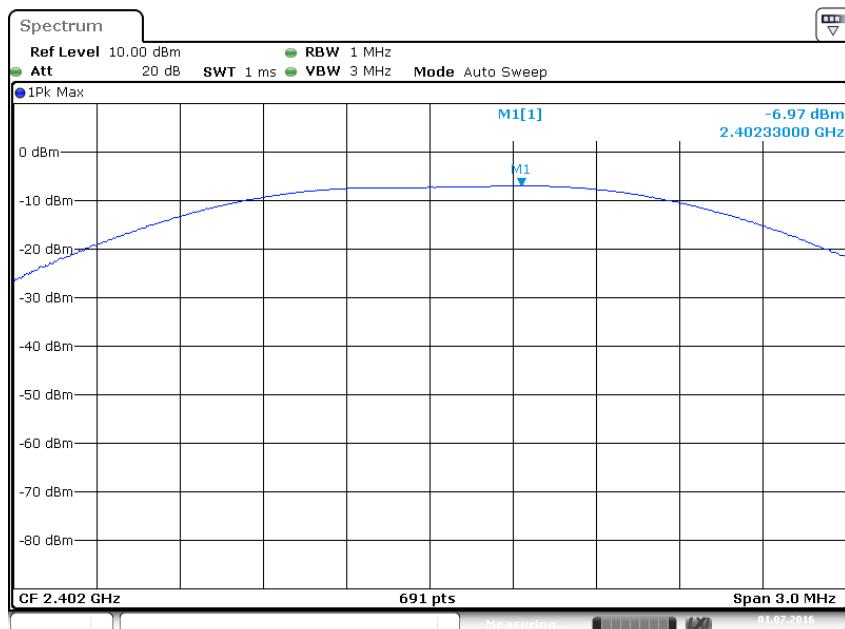
## Appendix A

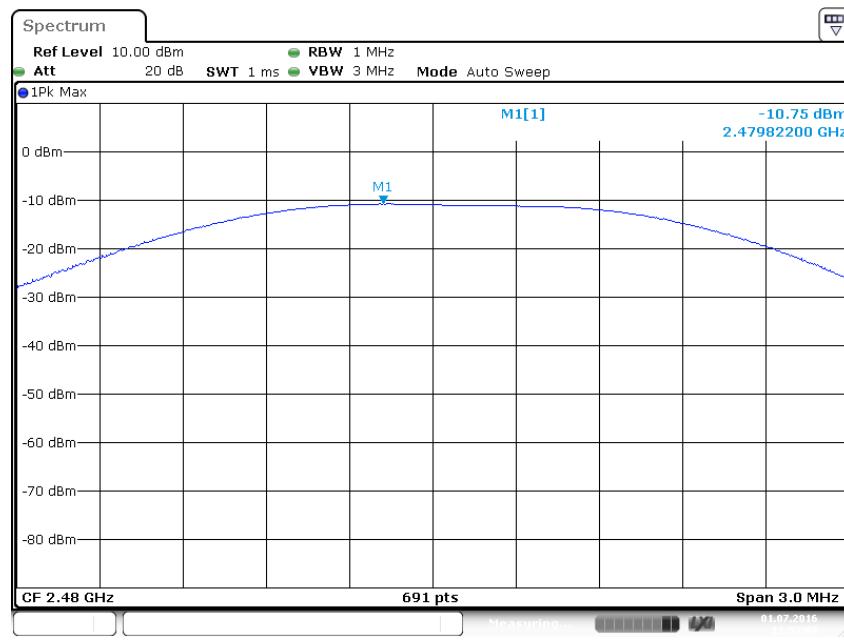
### Test Results of Bluetooth 4.0 Low Energy of Conducted Testing

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## Appendix A.1: Test Plots of Maximum Peak Conducted Output Power

### Low Energy Mode

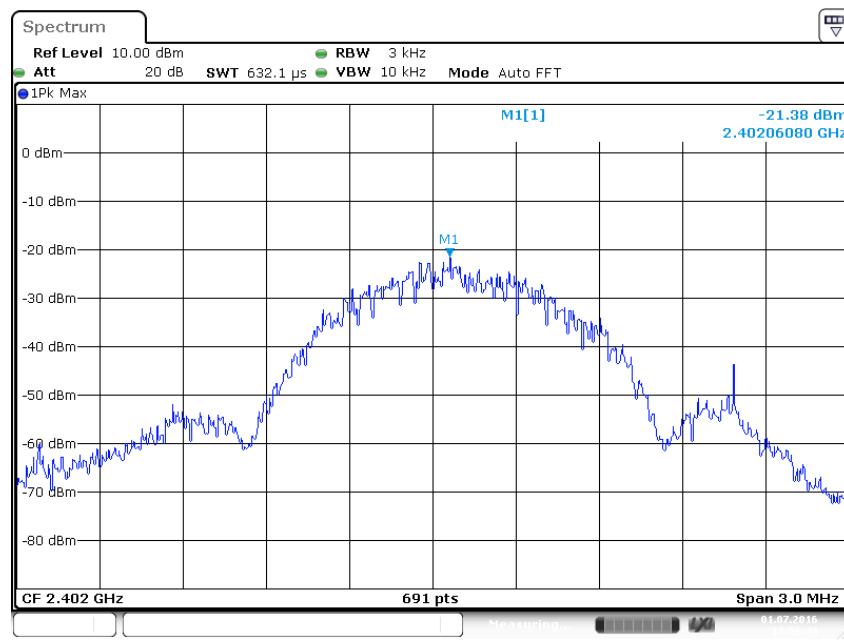




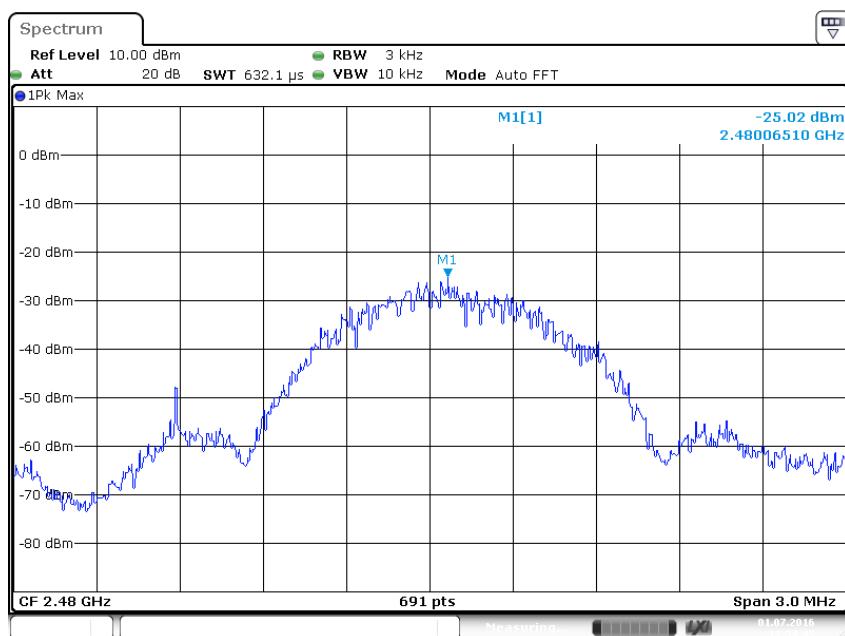
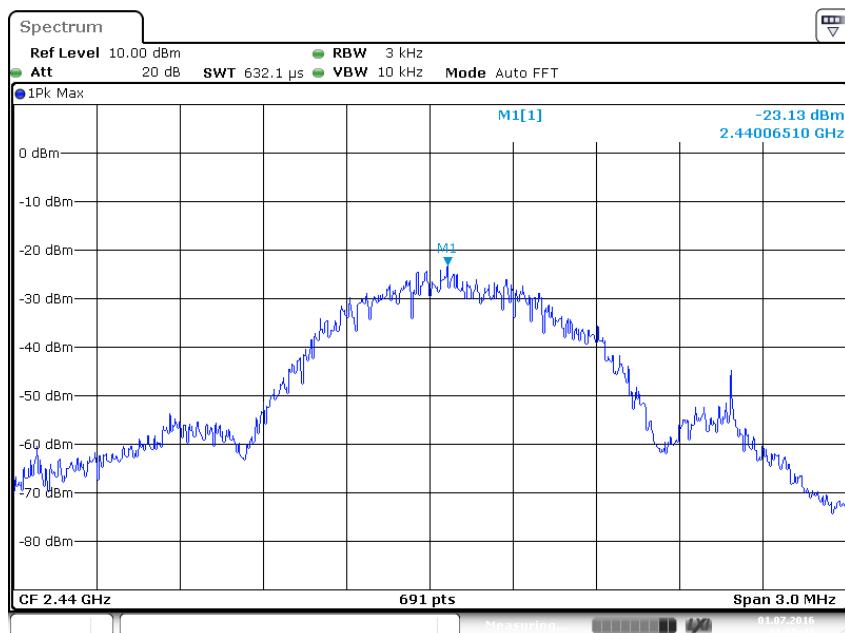
Date: 1.JUL.2016 11:53:08

## Appendix A.2: Test Plots of Conducted Power Spectral Density

### Low Energy Mode

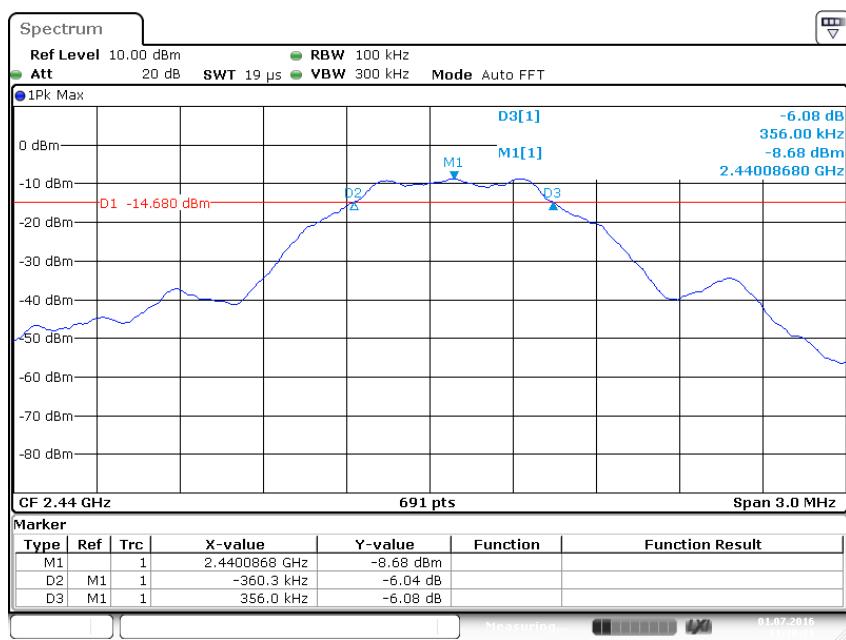
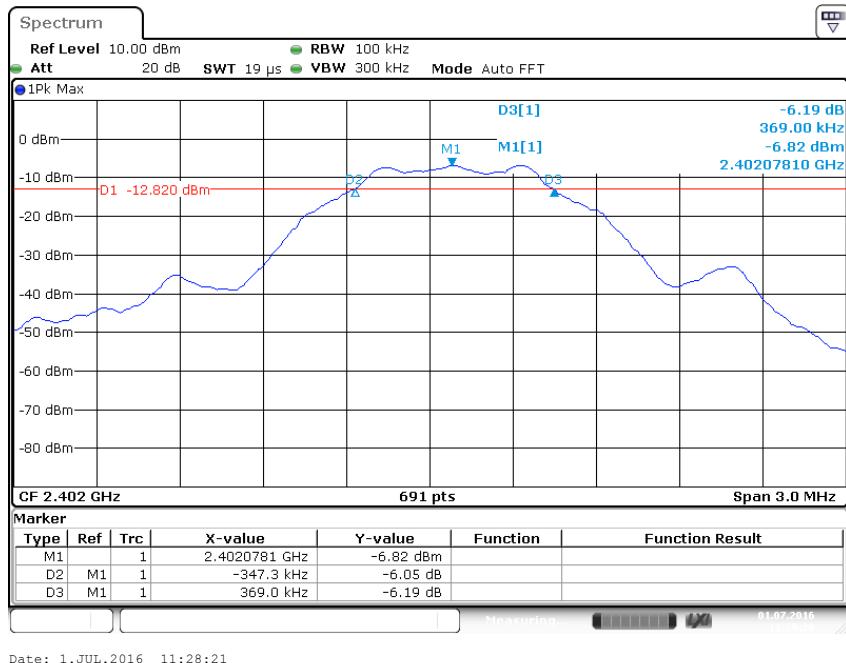


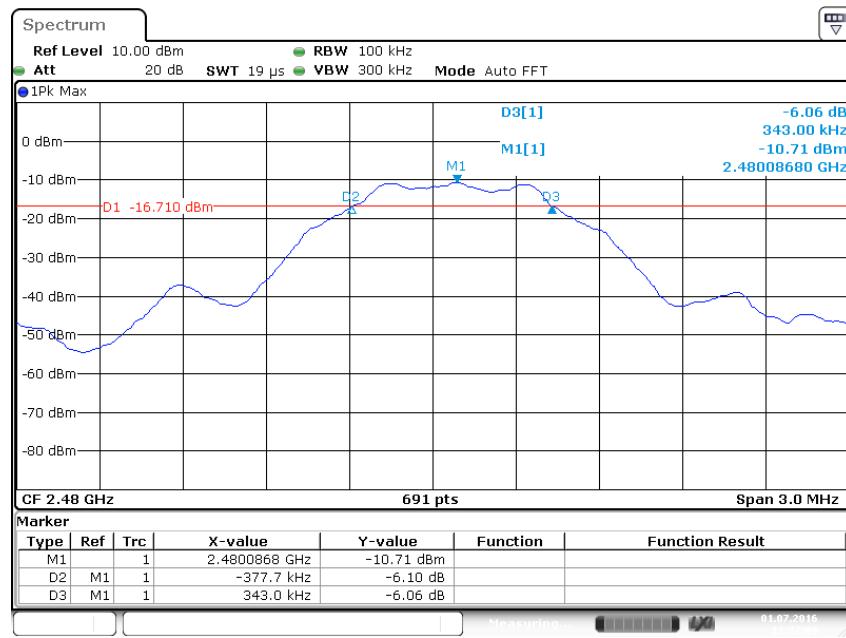
Date: 1.JUL.2016 11:56:44



### Appendix A.3: Test Plots of 6dB Bandwidth

#### Low Energy Mode

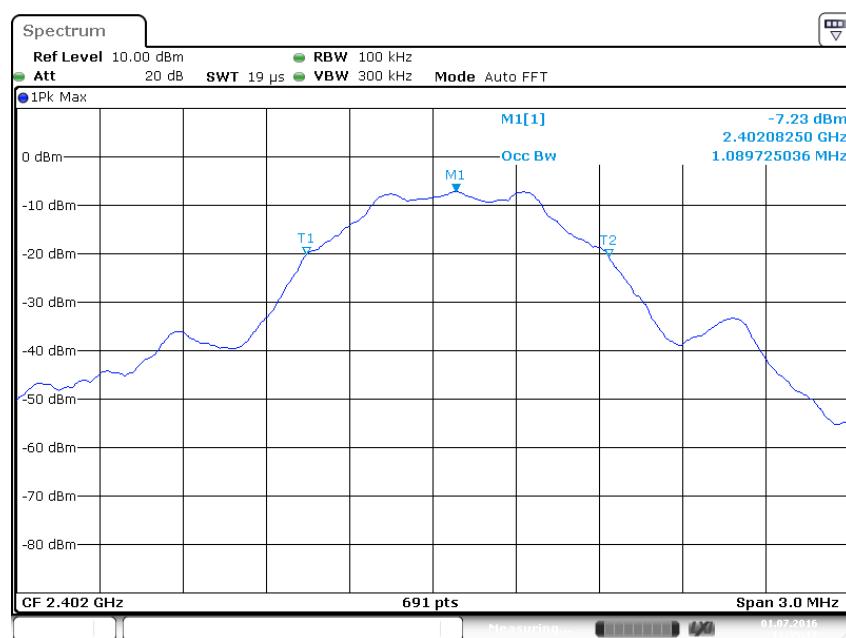




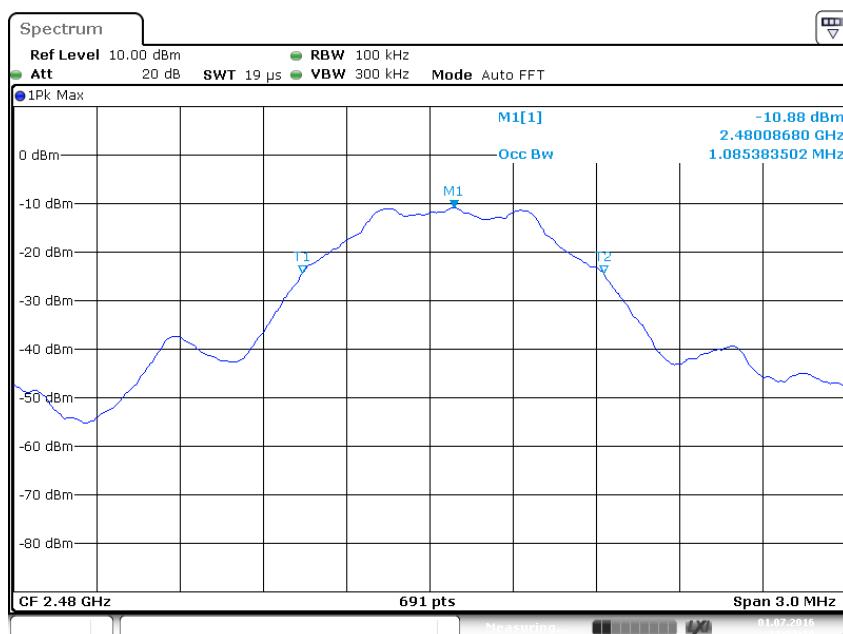
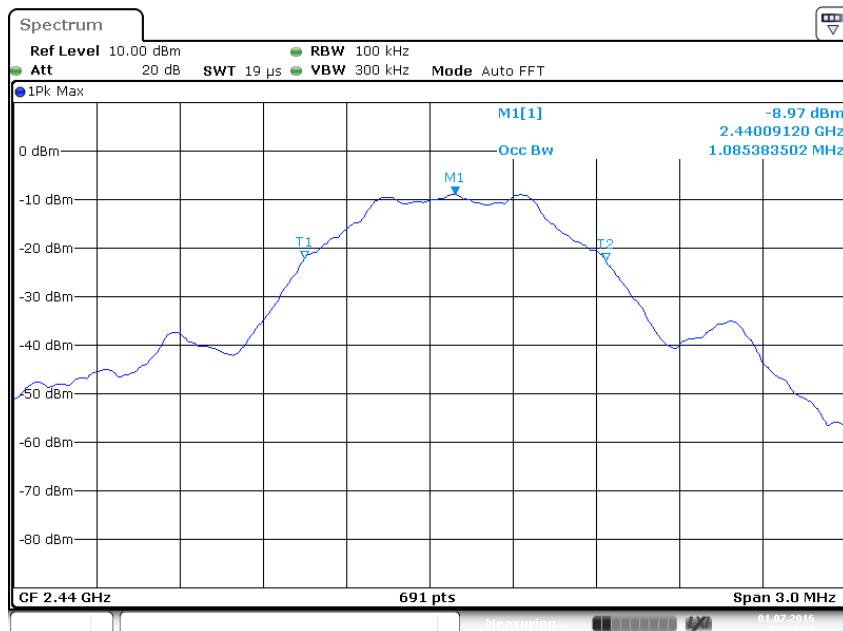
Date: 1.JUL.2016 11:32:09

## Appendix A.4: Test Plots of 99% Bandwidth

### Low Energy Mode

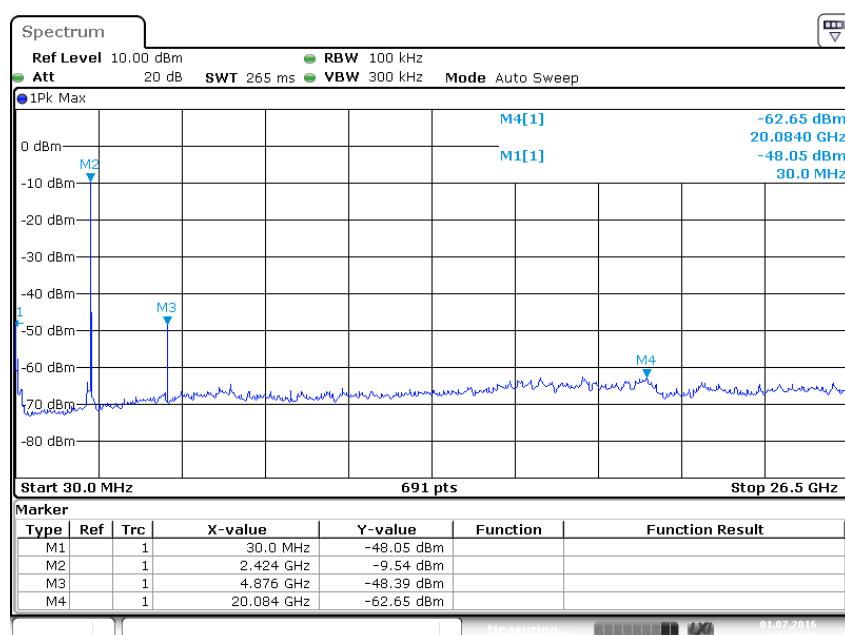
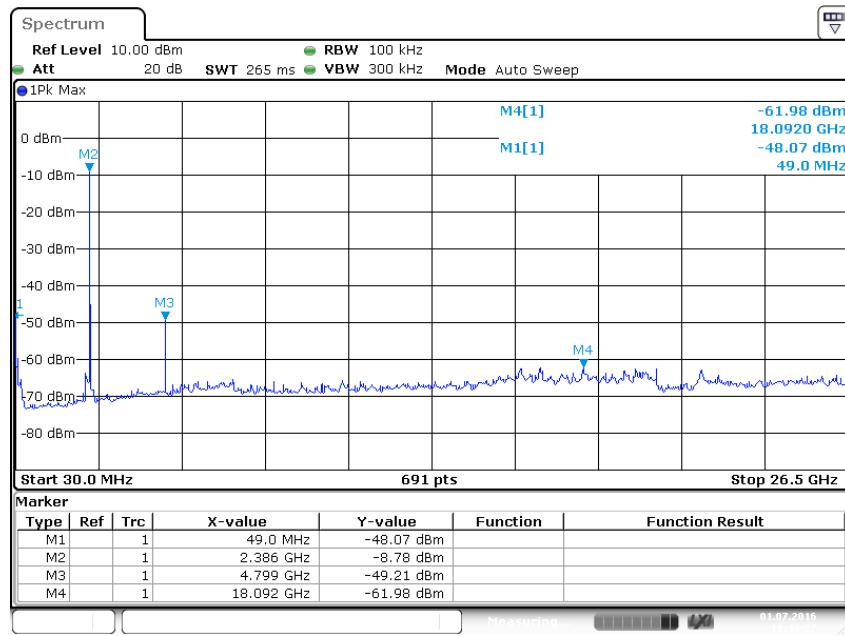


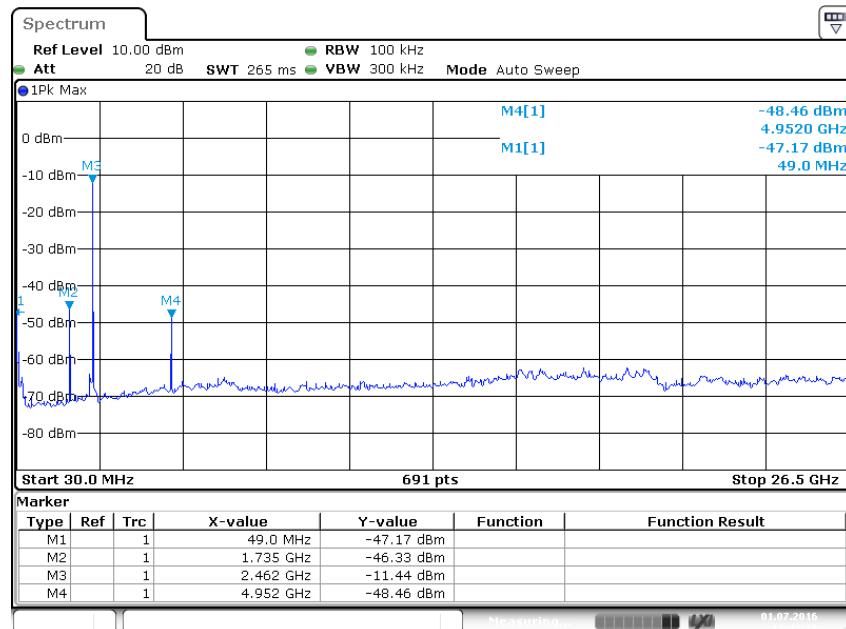
Date: 1.JUL.2016 11:35:17



## Appendix A.5: Test Plots of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

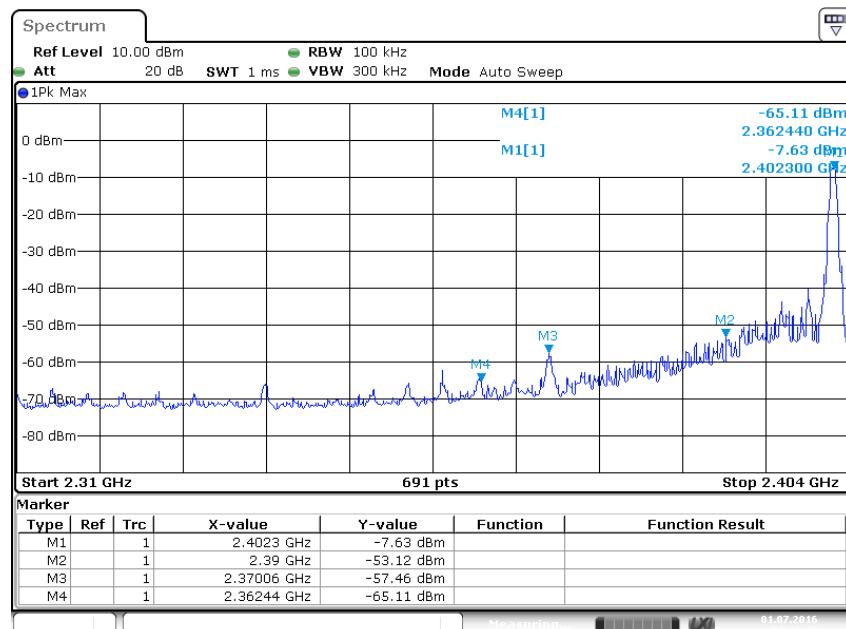
### Low Energy Mode



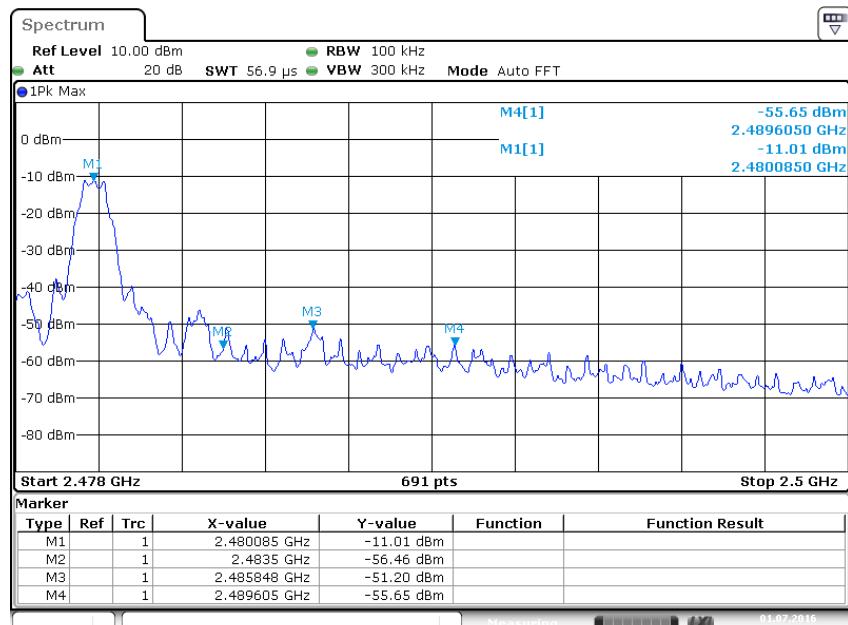


Date: 1.JUL.2016 11:42:28

### Low Energy Mode, Band Edge



Date: 1.JUL.2016 11:36:49



## Appendix B

# Test Results of Bluetooth 4.0 Low Energy of Conducted and Radiated Emission Testing

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## Appendix B.1: Test Plots of Radiated Spurious Emission

Low Energy mode, 9KHz - 30MHz

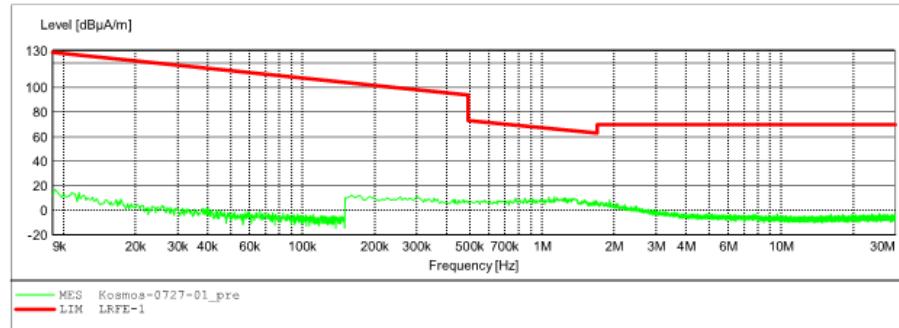
**ACCURATE TECHNOLOGY CO., LTD**

**FCC Class B 3m Radiated**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: TX 2402MHz  
Test Site: 2# Chamber  
Operator: LGWADE  
Test Specification: DC 3.7V  
Comment: X  
Start of Test: 2016-7-27 /

**SCAN TABLE: "LFRE Fin"**

| Start Frequency | Stop Frequency | Step Width | Detector  | Meas. | IF Time | Transducer Bandw. |
|-----------------|----------------|------------|-----------|-------|---------|-------------------|
| 9.0 kHz         | 150.0 kHz      | 100.0 Hz   | QuasiPeak | 1.0 s | 200 Hz  | 1516M             |
| 150.0 kHz       | 30.0 MHz       | 5.0 kHz    | QuasiPeak | 1.0 s | 9 kHz   | 1516M             |



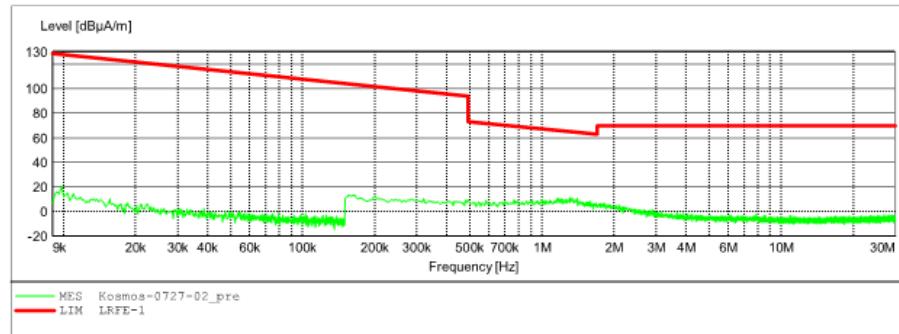
**ACCURATE TECHNOLOGY CO., LTD**

**FCC Class B 3m Radiated**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: TX 2440MHz  
Test Site: 2# Chamber  
Operator: LGWADE  
Test Specification: DC 3.7V  
Comment: X  
Start of Test: 2016-7-27 /

**SCAN TABLE: "LFRE Fin"**

Short Description: SUB STD VTERM2 1.70  
Start Stop Step Detector Meas. IF Transducer  
Frequency Frequency Width Time Bandw.  
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M  
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M



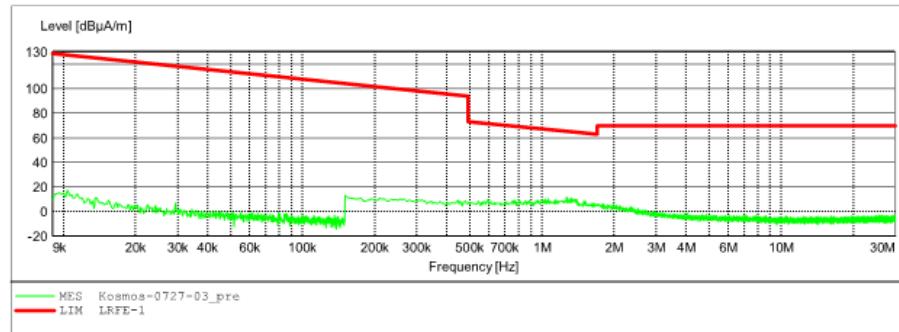
**ACCURATE TECHNOLOGY CO., LTD**

**FCC Class B 3m Radiated**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: TX 2480MHz  
Test Site: 2# Chamber  
Operator: LGWADE  
Test Specification: DC 3.7V  
Comment: X  
Start of Test: 2016-7-27 /

**SCAN TABLE: "LFRE Fin"**

Short Description: SUB STD VTERM2 1.70  
Start Stop Step Detector Meas. IF Transducer  
Frequency Frequency Width Time Bandw.  
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M  
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M



Low Energy mode, 30MHz - 1GHz



ACCURATE TECHNOLOGY CO., LTD.

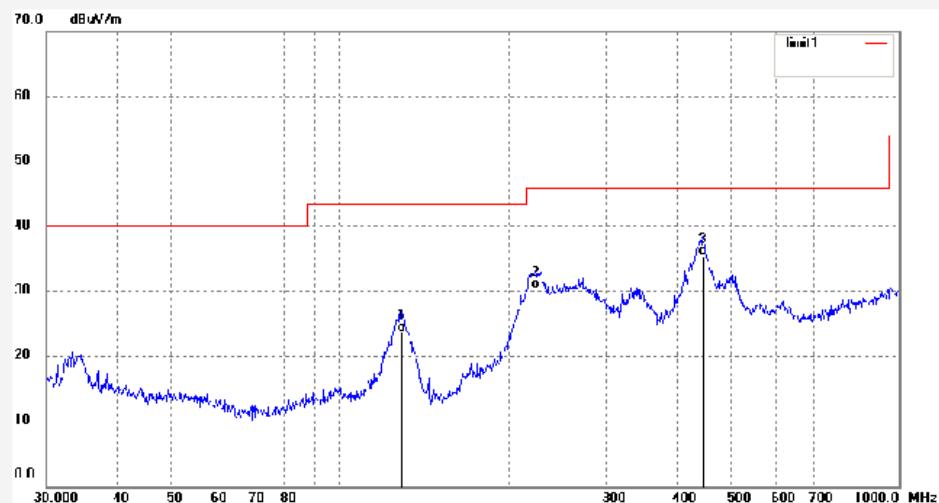
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: Igwade #2454  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: Kosmobits & Code Gamer  
Mode: TX 2402MHz  
Model: 620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG

Polarization: Horizontal  
Power Source: DC 3.7V  
Date: 2016/07/03  
Time:  
Engineer Signature: LGWADE  
Distance: 3m

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 129.4677       | 37.63               | -13.85         | 23.78              | 43.50             | -19.72         | QP       |                |                  |        |
| 2   | 224.5192       | 41.80               | -11.46         | 30.34              | 46.00             | -15.66         | QP       |                |                  |        |
| 3   | 446.4141       | 41.30               | -5.84          | 35.46              | 46.00             | -10.54         | QP       |                |                  |        |



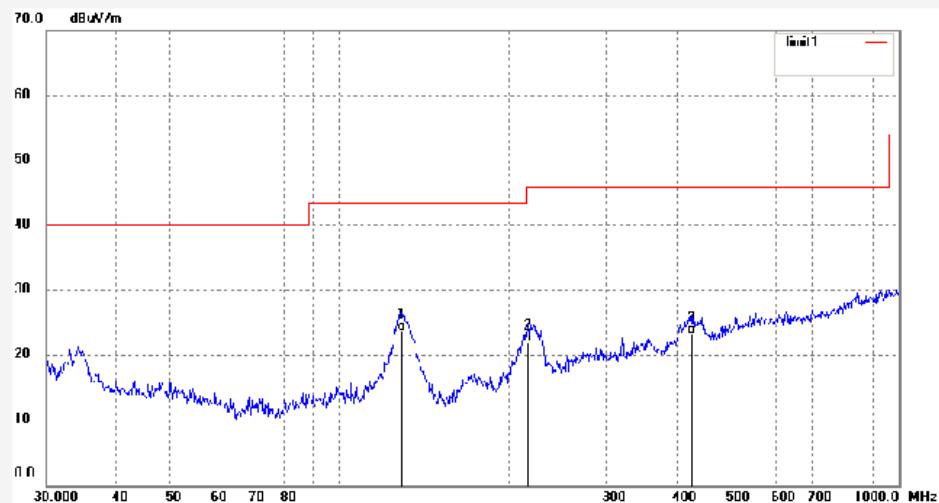
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Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2455                              | Polarization: Vertical     |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2402MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 129.0146       | 37.59               | -13.84         | 23.75              | 43.50             | -19.75         | QP       |                |                  |        |
| 2   | 217.5442       | 33.75               | -11.79         | 21.96              | 46.00             | -24.04         | QP       |                |                  |        |
| 3   | 426.5210       | 29.30               | -6.14          | 23.16              | 46.00             | -22.84         | QP       |                |                  |        |



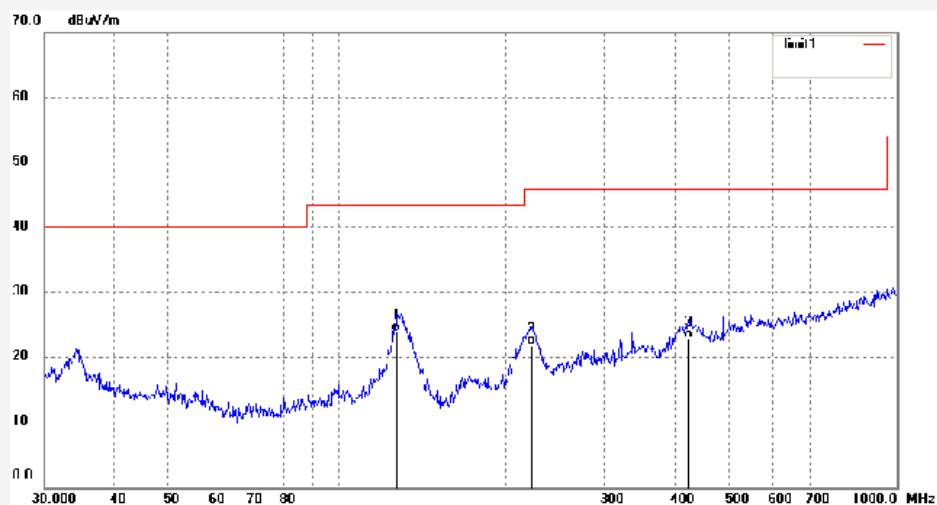
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|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2456                              | Polarization: Vertical     |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2440MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 127.6645       | 37.71               | -13.80         | 23.91              | 43.50             | -19.59         | QP       |                |                  |        |
| 2   | 222.1698       | 33.42               | -11.58         | 21.84              | 46.00             | -24.16         | QP       |                |                  |        |
| 3   | 423.5403       | 28.96               | -6.16          | 22.80              | 46.00             | -23.20         | QP       |                |                  |        |



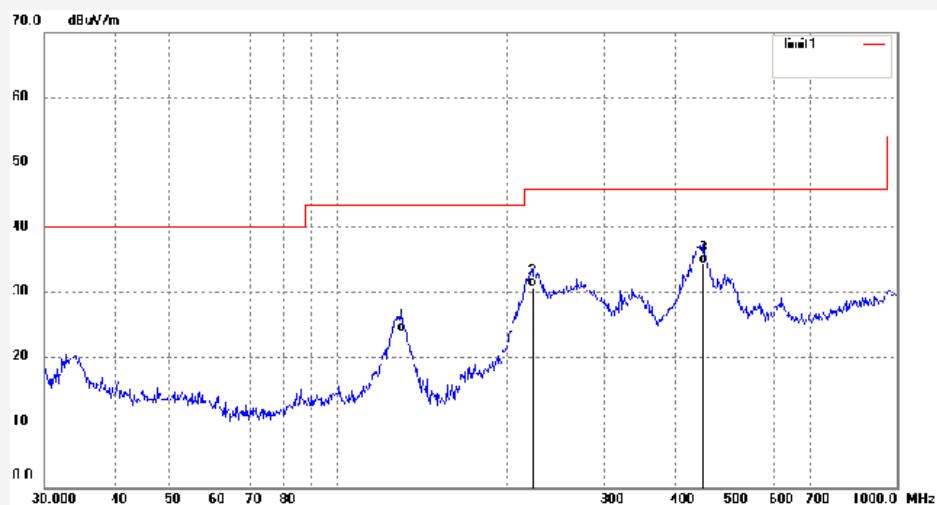
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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2457                         | Polarization:       | Horizontal |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2440MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 130.3788       | 37.70               | -13.88         | 23.82              | 43.50             | -19.68         | QP       |                |                  |        |
| 2   | 222.9501       | 42.18               | -11.55         | 30.63              | 46.00             | -15.37         | QP       |                |                  |        |
| 3   | 449.5557       | 40.15               | -5.78          | 34.37              | 46.00             | -11.63         | QP       |                |                  |        |



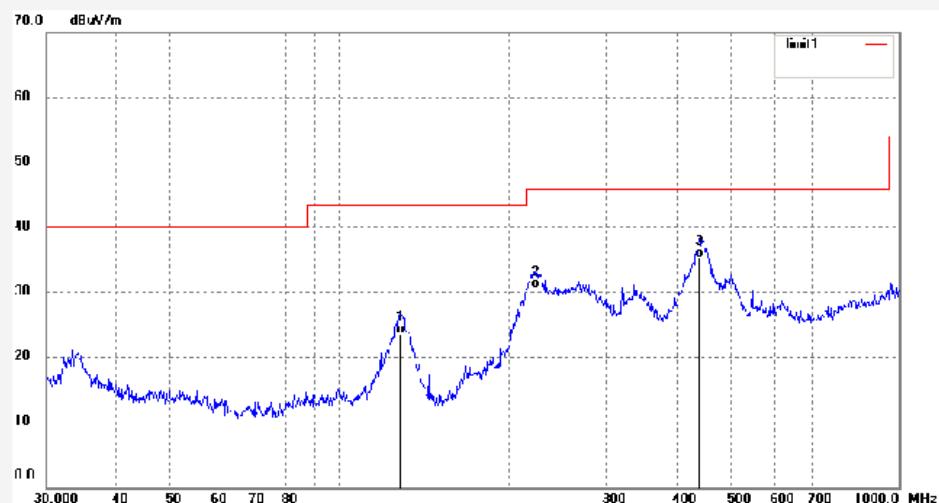
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|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2458                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2480MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 128.5629       | 37.39               | -13.82         | 23.57              | 43.50             | -19.93         | QP       |                |                  |        |
| 2   | 224.5192       | 41.97               | -11.46         | 30.51              | 46.00             | -15.49         | QP       |                |                  |        |
| 3   | 440.1963       | 41.10               | -5.90          | 35.20              | 46.00             | -10.80         | QP       |                |                  |        |

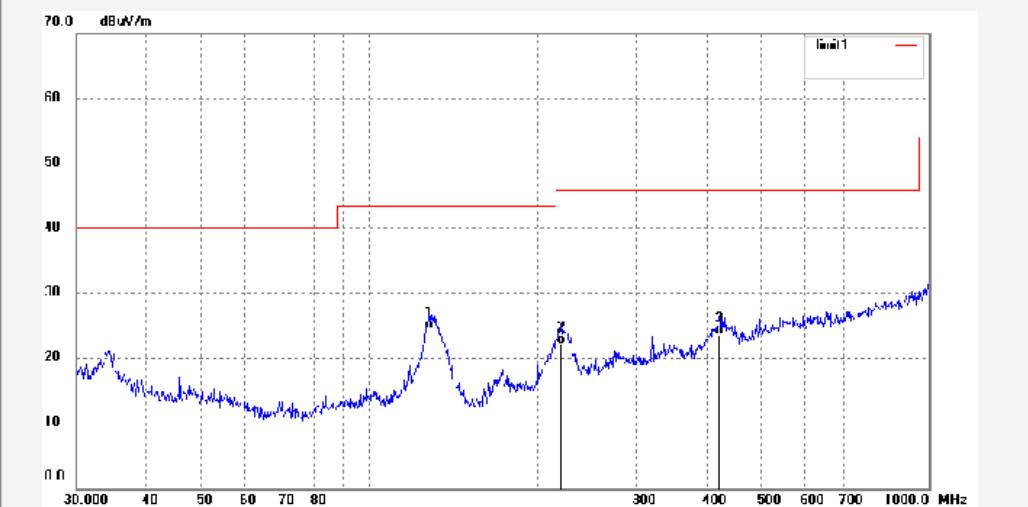


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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2459                         | Polarization:       | Vertical   |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2480MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |
| Note:             |                                      |                     |            |



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 128.1129    | 38.25            | -13.81      | 24.44           | 43.50          | -19.06      | QP       |             |               |        |
| 2   | 220.6170    | 33.88            | -11.68      | 22.20           | 46.00          | -23.80      | QP       |             |               |        |
| 3   | 422.0577    | 29.69            | -6.16       | 23.53           | 46.00          | -22.47      | QP       |             |               |        |

Low Energy mode, 1GHz - 18GHz



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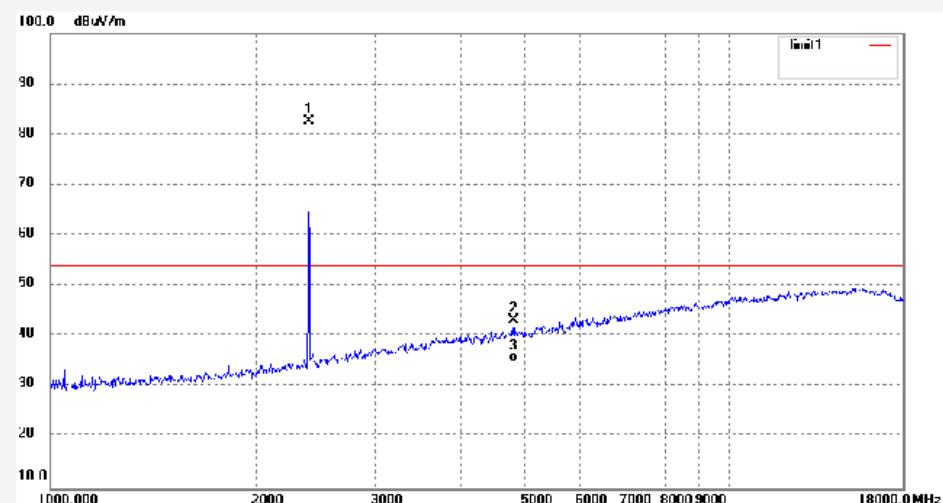
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Job No.: Igwade #2438  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: Kosmobits & Code Gamer  
Mode: TX 2402MHz  
Model: 620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG

Polarization: Horizontal  
Power Source: DC 3.7V  
Date: 2016/07/03  
Time:  
Engineer Signature: LGWADE  
Distance: 3m

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2402.000       | 90.00               | -7.45          | 82.55              | /                 | /              | peak     |                |                  |        |
| 2   | 4804.027       | 43.41               | -0.30          | 43.11              | 74.00             | -30.89         | peak     |                |                  |        |
| 3   | 4804.027       | 35.20               | -0.30          | 34.90              | 54.00             | -19.10         | AVG      |                |                  |        |

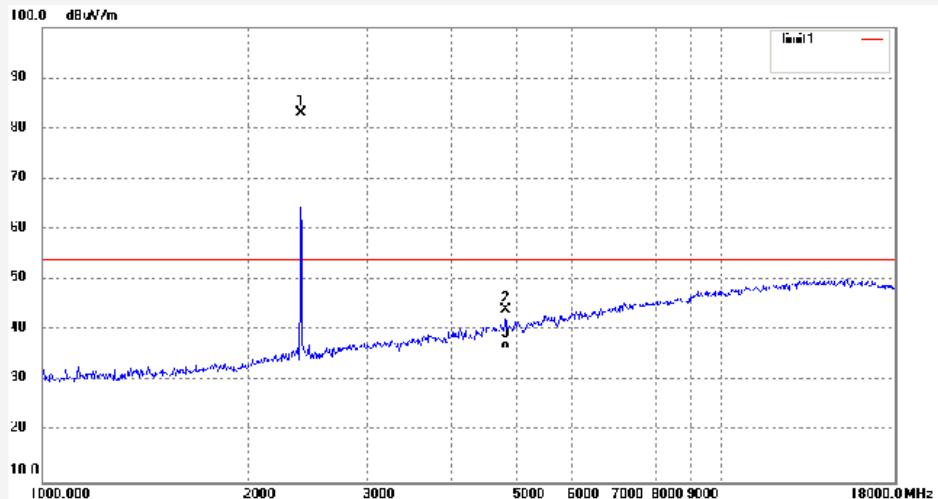


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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2439                         | Polarization:       | Vertical   |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2402MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |
| Note:             |                                      |                     |            |



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2402.000    | 90.47            | -7.45       | 83.02           | /              | /           | peak     |             |               |        |
| 2   | 4804.025    | 44.35            | -0.30       | 44.05           | 74.00          | -29.95      | peak     |             |               |        |
| 3   | 4804.025    | 36.58            | -0.30       | 36.28           | 54.00          | -17.72      | AVG      |             |               |        |



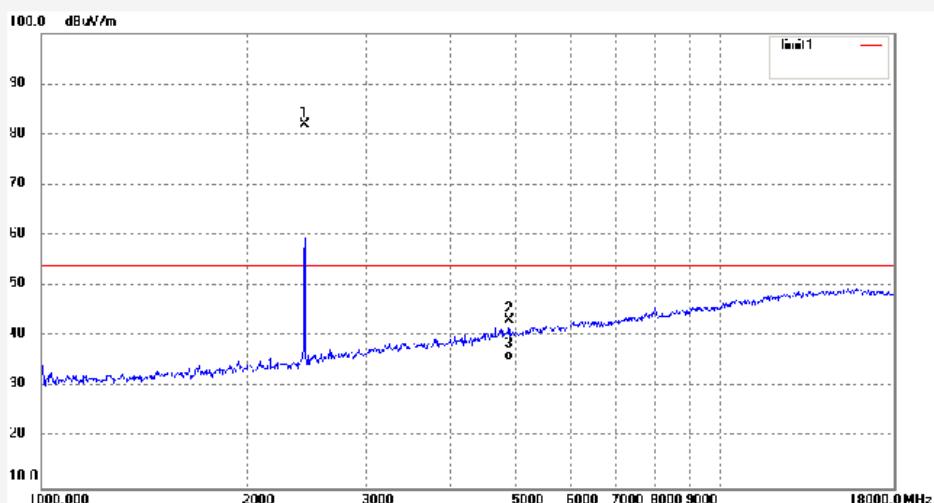
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|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2442                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2440MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2440.000       | 89.23               | -7.36          | 81.87              | /                 | /              | peak     |                |                  |        |
| 2   | 4880.028       | 43.14               | 0.13           | 43.27              | 74.00             | -30.73         | peak     |                |                  |        |
| 3   | 4880.028       | 35.23               | 0.13           | 35.36              | 54.00             | -18.64         | AVG      |                |                  |        |



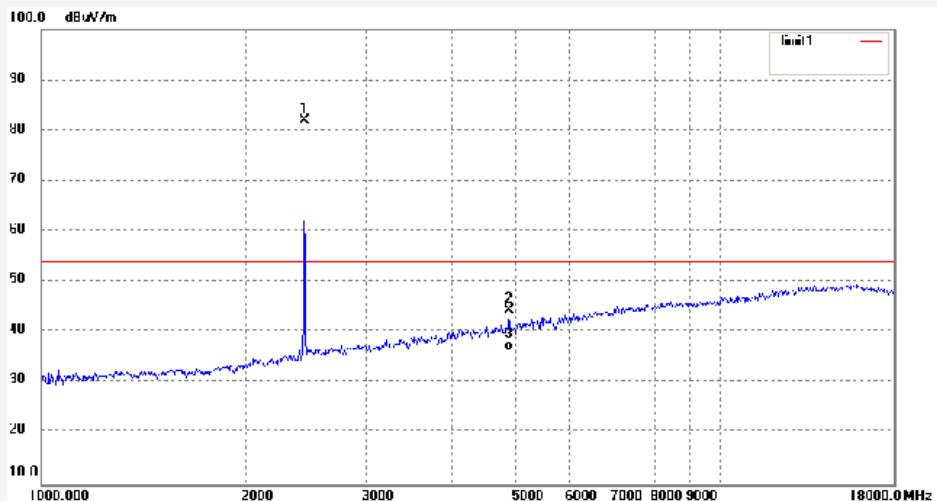
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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2443                         | Polarization:       | Vertical   |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2440MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2440.000    | 89.32            | -7.36       | 81.96           | /              | /           | peak     |             |               |        |
| 2   | 4880.024    | 44.20            | 0.13        | 44.33           | 74.00          | -29.67      | peak     |             |               |        |
| 3   | 4880.024    | 36.25            | 0.13        | 36.38           | 54.00          | -17.62      | AVG      |             |               |        |

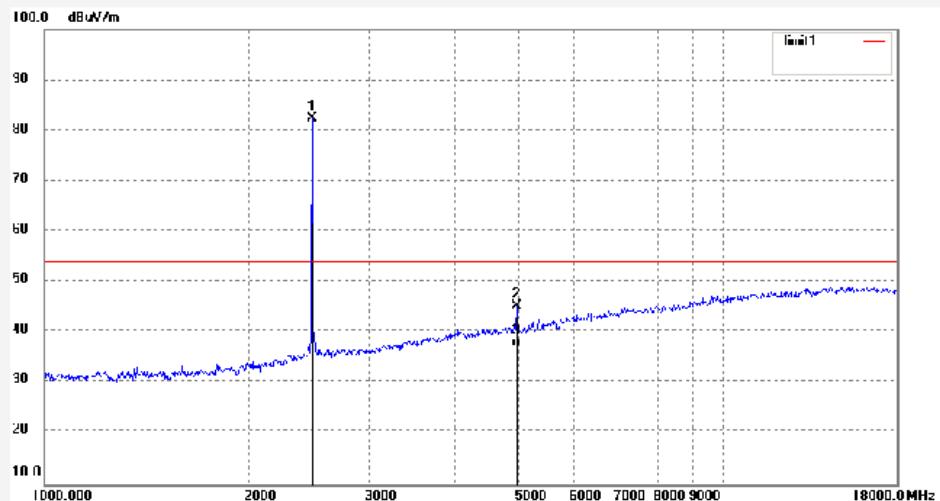


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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2444                         | Polarization:       | Vertical   |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2480MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |
| Note:             |                                      |                     |            |



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2480.000    | 89.82            | -7.37       | 82.45           | /              | /           | peak     |             |               |        |
| 2   | 4960.026    | 44.60            | 0.52        | 45.12           | 74.00          | -28.88      | peak     |             |               |        |
| 3   | 4960.026    | 36.58            | 0.52        | 37.10           | 54.00          | -16.90      | AVG      |             |               |        |

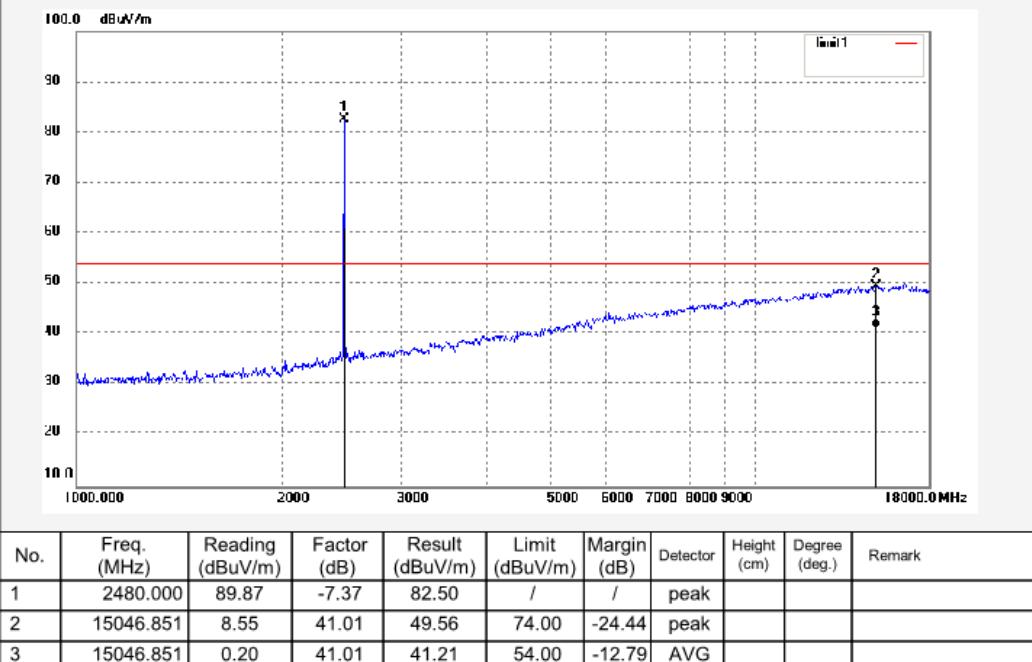


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|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2445                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2480MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |
| Note:                                              |                            |



Low Energy mode, 18GHz - 26.5GHz



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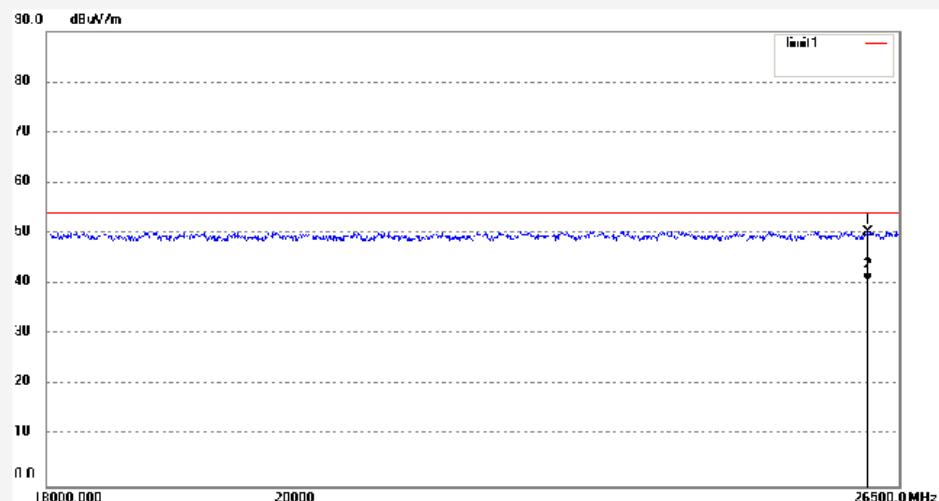
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Fax:+86-0755-26503396

Job No.: Igwade #2448  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: Kosmobits & Code Gamer  
Mode: TX 2402MHz  
Model: 620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG

Polarization: Vertical  
Power Source: DC 3.7V  
Date: 2016/07/03  
Time:  
Engineer Signature: LGWADE  
Distance: 3m

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 26123.470      | 33.09               | 17.15          | 50.24              | 74.00             | -23.76         | peak     |                |                  |        |
| 2   | 26123.470      | 23.54               | 17.15          | 40.69              | 54.00             | -13.31         | AVG      |                |                  |        |



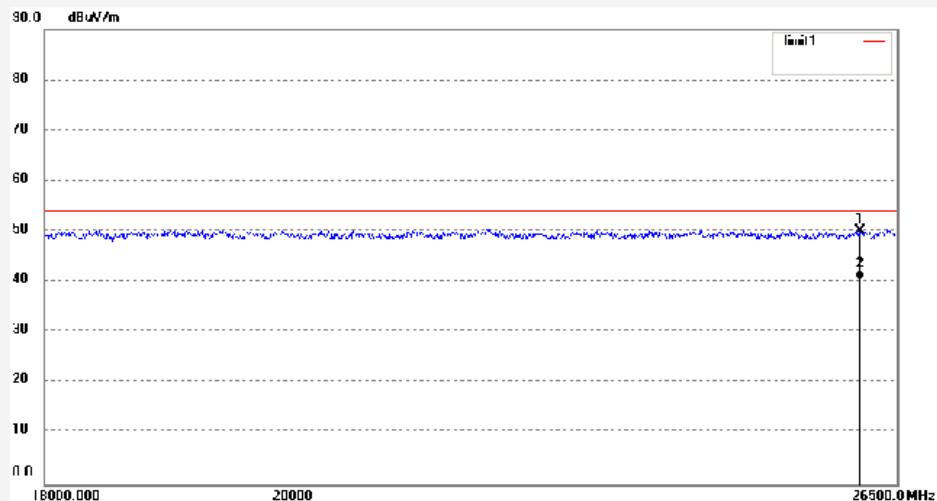
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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2449                         | Polarization:       | Horizontal |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2402MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |

|       |
|-------|
| Note: |
|-------|



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 26062.917      | 33.49               | 16.50          | 49.99              | 74.00             | -24.01         | peak     |                |                  |        |
| 2   | 26062.917      | 23.90               | 16.50          | 40.40              | 54.00             | -13.60         | AVG      |                |                  |        |



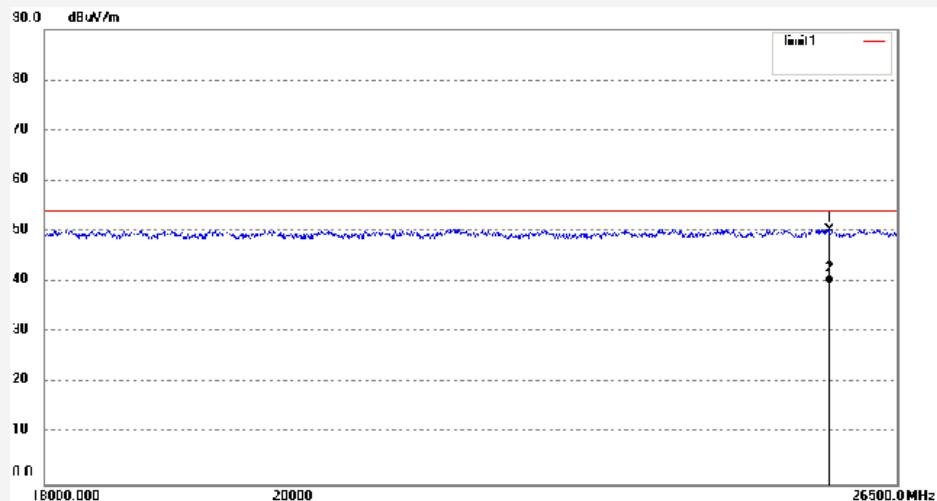
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Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2450                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2440MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

|       |
|-------|
| Note: |
|-------|



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 25702.536      | 33.76               | 16.50          | 50.26              | 74.00             | -23.74         | peak     |                |                  |        |
| 2   | 25702.536      | 23.10               | 16.50          | 39.60              | 54.00             | -14.40         | AVG      |                |                  |        |



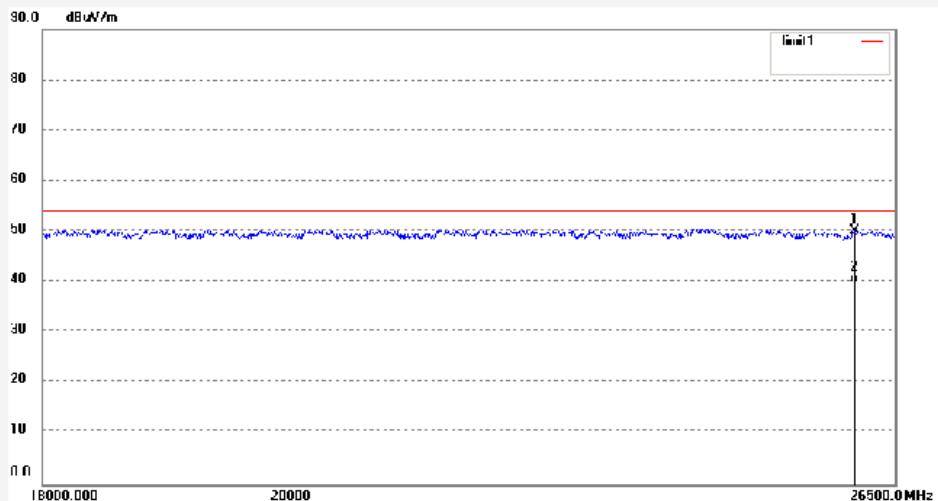
**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2451                              | Polarization: Vertical     |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2440MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

|       |
|-------|
| Note: |
|-------|



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 26022.626   | 32.81            | 17.22       | 50.03           | 74.00          | -23.97      | peak     |             |               |        |
| 2   | 26022.626   | 22.56            | 17.22       | 39.78           | 54.00          | -14.22      | AVG      |             |               |        |



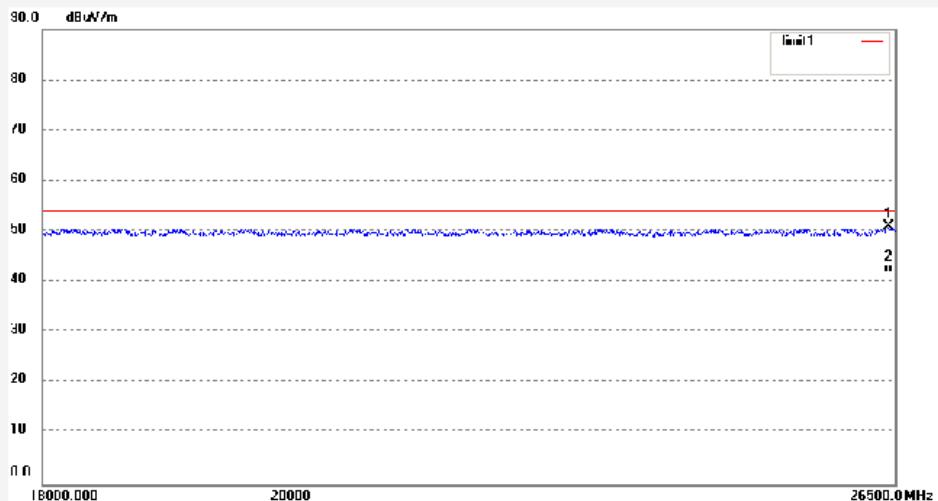
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2452                              | Polarization: Vertical     |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2480MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

|       |
|-------|
| Note: |
|-------|



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 26428.351      | 34.00               | 16.95          | 50.95              | 74.00             | -23.05         | peak     |                |                  |        |
| 2   | 26428.351      | 24.89               | 16.95          | 41.84              | 54.00             | -12.16         | AVG      |                |                  |        |



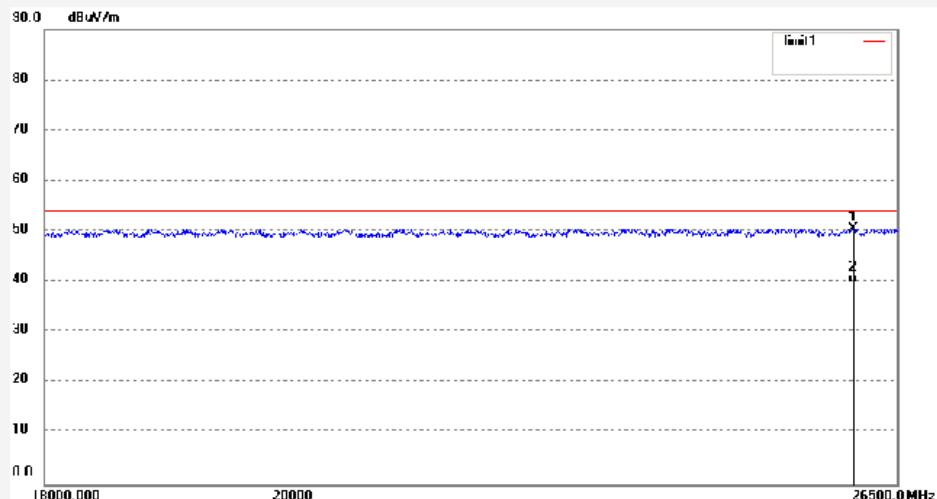
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2453                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2480MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

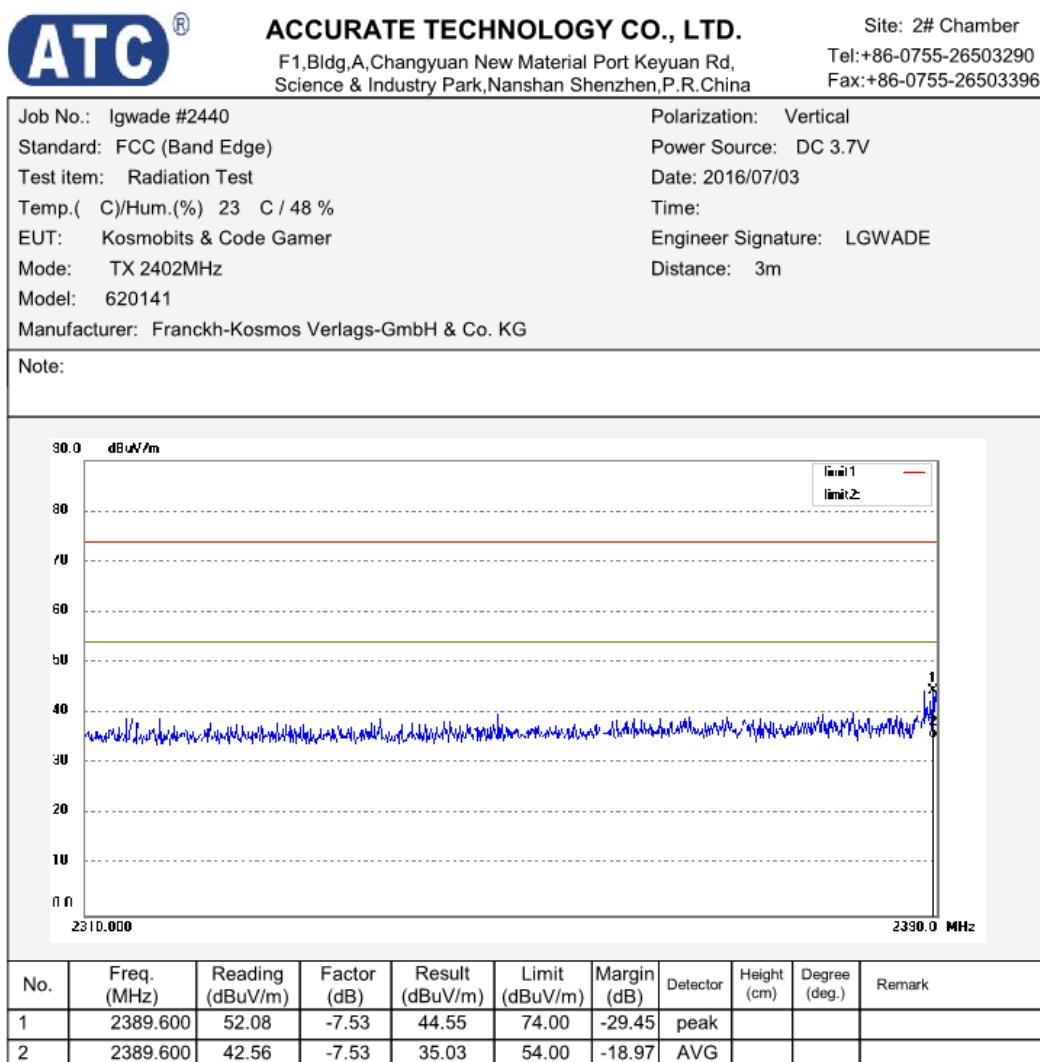
|       |
|-------|
| Note: |
|-------|



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 25972.351   | 33.99            | 16.50       | 50.49           | 74.00          | -23.51      | peak     |             |               |        |
| 2   | 25972.351   | 23.22            | 16.50       | 39.72           | 54.00          | -14.28      | AVG      |             |               |        |

## Appendix B.2: Test Plots of Band Edge (Radiated)

Low Energy mode, Low Channel





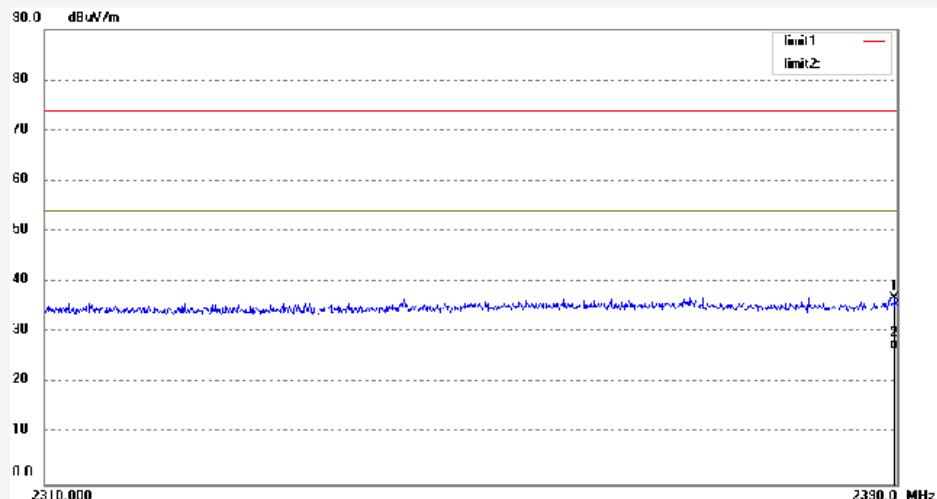
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Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2441                         | Polarization:       | Horizontal |
| Standard:         | FCC (Band Edge)                      | Power Source:       | DC 3.7V    |
| Test item:        | Radiation Test                       | Date:               | 2016/07/03 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | TX 2402MHz                           | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2389.760    | 44.34            | -7.53       | 36.81           | 74.00          | -37.19      | peak     |             |               |        |
| 2   | 2389.760    | 34.20            | -7.53       | 26.67           | 54.00          | -27.33      | AVG      |             |               |        |

Low Energy mode, High Channel



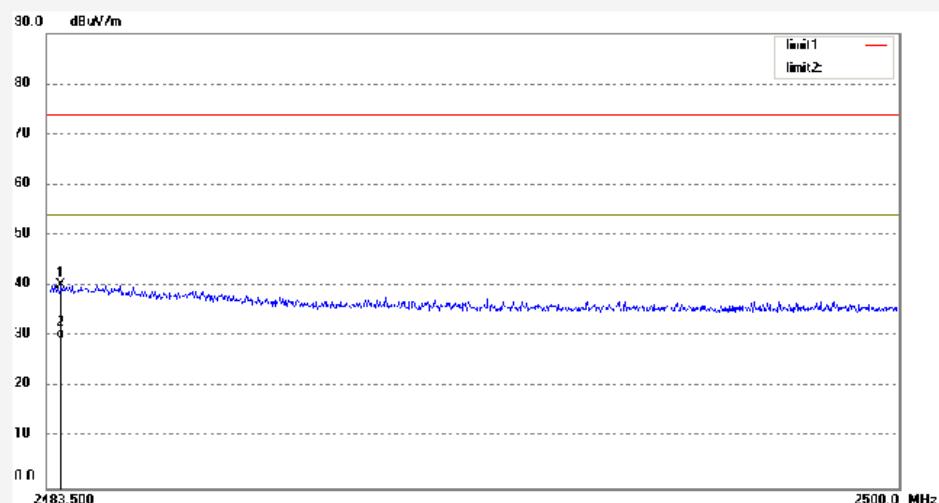
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
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Fax:+86-0755-26503396

Job No.: Igwade #2446      Polarization: Horizontal  
Standard: FCC (Band Edge)      Power Source: DC 3.7V  
Test item: Radiation Test      Date: 2016/07/03  
Temp.( C)/Hum.(%) 23 C / 48 %      Time:  
EUT: Kosmobits & Code Gamer      Engineer Signature: LGWADE  
Mode: TX 2480MHz      Distance: 3m  
Model: 620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 2483.780       | 47.52               | -7.38          | 40.14              | 74.00             | -33.86         | peak     |                |                  |        |
| 2   | 2483.780       | 37.00               | -7.38          | 29.62              | 54.00             | -24.38         | AVG      |                |                  |        |



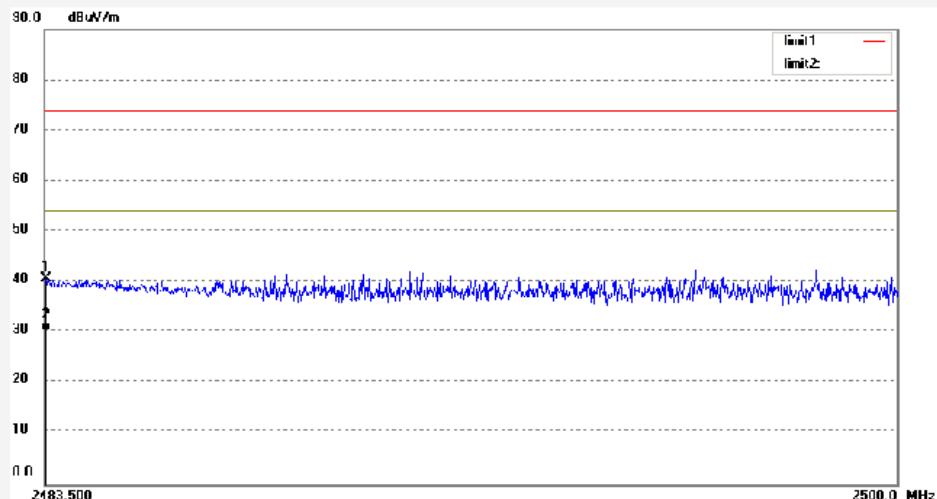
ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
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Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2447                              | Polarization: Vertical     |
| Standard: FCC (Band Edge)                          | Power Source: DC 3.7V      |
| Test item: Radiation Test                          | Date: 2016/07/03           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: TX 2480MHz                                   | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

|       |
|-------|
| Note: |
|-------|



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 2483.533    | 47.98            | -7.37       | 40.61           | 74.00          | -33.39      | peak     |             |               |        |
| 2   | 2483.533    | 37.56            | -7.37       | 30.19           | 54.00          | -23.81      | AVG      |             |               |        |

## Appendix B.3: Test Plots of Conducted Emission

### B Mode

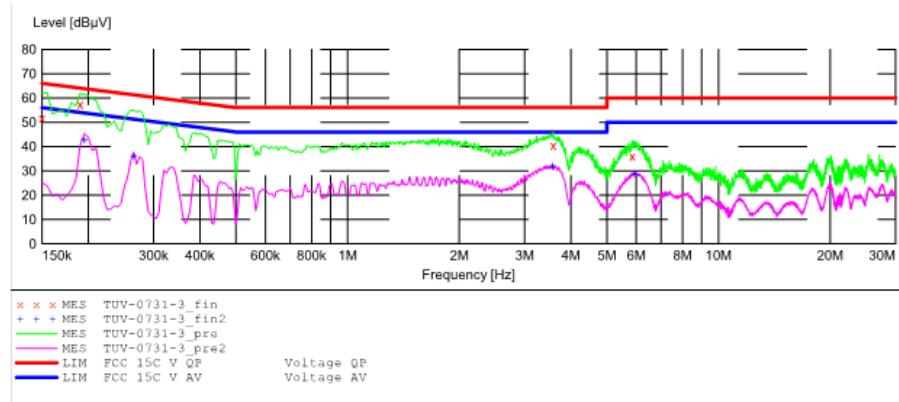
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#### **CONDUCTED EMISSION STANDARD FCC PART 15 C**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: On with Bluetooth  
Test Site: 1#Shielding Room  
Operator: LGWADE  
Test Specification: N 120V/60Hz  
Comment:  
Start of Test: 7/31/2016 /

#### **SCAN TABLE: "V 9K-30MHz fin"**

| Start Frequency | Stop Frequency | Step Width | Detector  | Meas. | IF Time | Transducer Bandw. |
|-----------------|----------------|------------|-----------|-------|---------|-------------------|
| 9.0 kHz         | 150.0 kHz      | 100.0 Hz   | QuasiPeak | 1.0 s | 200 Hz  | NSLK8126 2008     |
|                 |                |            | Average   |       |         |                   |
| 150.0 kHz       | 30.0 MHz       | 5.0 kHz    | QuasiPeak | 1.0 s | 9 kHz   | NSLK8126 2008     |
|                 |                |            | Average   |       |         |                   |



#### **MEASUREMENT RESULT: "TUV-0731-3\_fin"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.150000  | 51.70      | 10.5   | 66         | 14.3   | QP       | N    | GND |
|           | 0.190000  | 57.40      | 10.5   | 64         | 6.6    | QP       | N    | GND |
|           | 3.580000  | 40.50      | 11.1   | 56         | 15.5   | QP       | N    | GND |
|           | 5.850000  | 36.00      | 11.2   | 60         | 24.0   | QP       | N    | GND |

#### **MEASUREMENT RESULT: "TUV-0731-3\_fin2"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.195000  | 42.60      | 10.5   | 54         | 11.2   | AV       | N    | GND |
|           | 0.265000  | 35.90      | 10.6   | 51         | 15.4   | AV       | N    | GND |
|           | 3.560000  | 31.80      | 11.1   | 46         | 14.2   | AV       | N    | GND |
|           | 5.950000  | 28.60      | 11.2   | 50         | 21.4   | AV       | N    | GND |

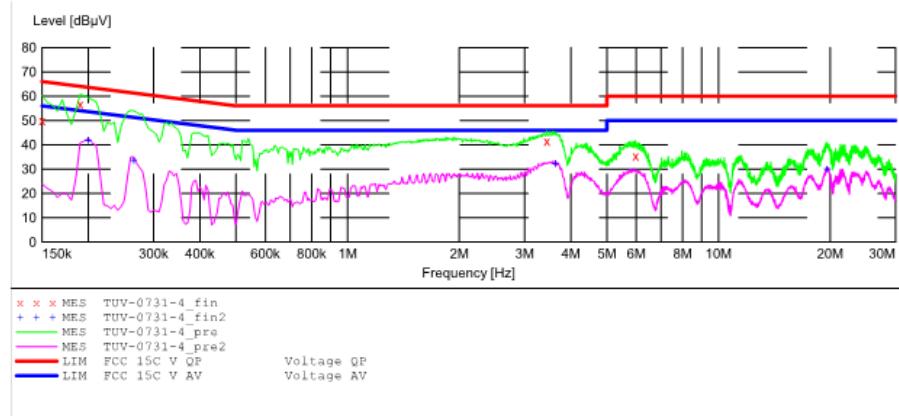
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15 C**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: On with Bluetooth  
Test Site: 1#Shielding Room  
Operator: LGWADE  
Test Specification: L 120V/60Hz  
Comment:  
Start of Test: 7/31/2016 /

**SCAN TABLE: "V 9K-30MHz fin"**

| Start     | Stop      | Step     | Detector  | Meas. | IF     | Transducer    |
|-----------|-----------|----------|-----------|-------|--------|---------------|
| 9.0 kHz   | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
|           |           |          | Average   |       |        |               |
| 150.0 kHz | 30.0 MHz  | 5.0 kHz  | QuasiPeak | 1.0 s | 9 kHz  | NSLK8126 2008 |
|           |           |          | Average   |       |        |               |



**MEASUREMENT RESULT: "TUV-0731-4\_fin"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.150000  | 50.00      | 10.5   | 66         | 16.0   | QP       | L1   | GND |
|           | 0.190000  | 56.70      | 10.5   | 64         | 7.3    | QP       | L1   | GND |
|           | 3.440000  | 41.50      | 11.1   | 56         | 14.5   | QP       | L1   | GND |
|           | 5.970000  | 35.40      | 11.2   | 60         | 24.6   | QP       | L1   | GND |

**MEASUREMENT RESULT: "TUV-0731-4\_fin2"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.200000  | 41.80      | 10.5   | 54         | 11.8   | AV       | L1   | GND |
|           | 0.265000  | 33.50      | 10.6   | 51         | 17.8   | AV       | L1   | GND |
|           | 3.630000  | 32.10      | 11.1   | 46         | 13.9   | AV       | L1   | GND |
|           | 19.615000 | 29.90      | 11.4   | 50         | 20.1   | AV       | L1   | GND |

## C Mode

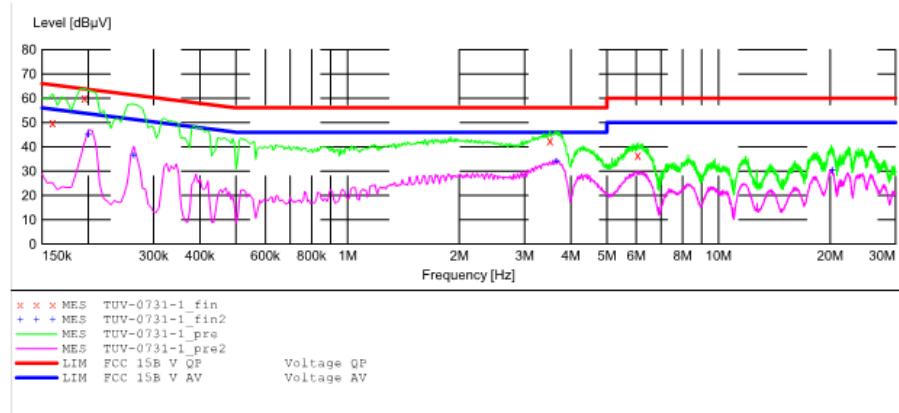
**ACCURATE TECHNOLOGY CO., LTD**

### **CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: Charging  
Test Site: 1#Shielding Room  
Operator: LGWADE  
Test Specification: L 120V/60Hz  
Comment:  
Start of Test: 7/31/2016 /

#### **SCAN TABLE: "V 9K-30MHz fin"**

Short Description: \_SUB\_STD\_VTERM2 1.70  
Start Stop Step \_Detector Meas. IF Transducer  
Frequency Frequency Width Time Bandw.  
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008  
Average  
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008  
Average



#### **MEASUREMENT RESULT: "TUV-0731-1\_fin"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.160000  | 49.90      | 10.5   | 66         | 15.6   | QP       | L1   | GND |
|           | 0.195000  | 60.10      | 10.5   | 64         | 3.7    | QP       | L1   | GND |
|           | 3.510000  | 42.50      | 11.1   | 56         | 13.5   | QP       | L1   | GND |
|           | 6.050000  | 36.50      | 11.2   | 60         | 23.5   | QP       | L1   | GND |

#### **MEASUREMENT RESULT: "TUV-0731-1\_fin2"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.200000  | 45.10      | 10.5   | 54         | 8.5    | AV       | L1   | GND |
|           | 0.265000  | 36.50      | 10.6   | 51         | 14.8   | AV       | L1   | GND |
|           | 3.650000  | 34.10      | 11.1   | 46         | 11.9   | AV       | L1   | GND |
|           | 20.245000 | 30.30      | 11.4   | 50         | 19.7   | AV       | L1   | GND |

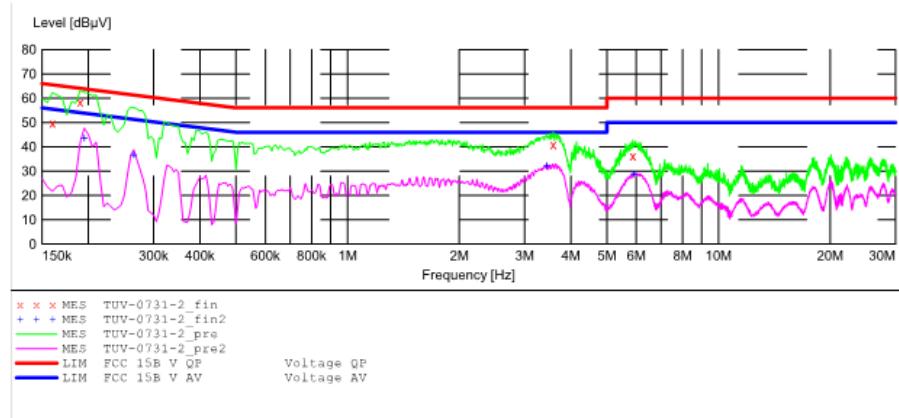
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**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: Kosmobits & Code Gamer M/N:620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG  
Operating Condition: Charging  
Test Site: 1#Shielding Room  
Operator: LGWADE  
Test Specification: N 120V/60Hz  
Comment:  
Start of Test: 7/31/2016 /

**SCAN TABLE: "V 9K-30MHz fin"**

| Start     | Stop      | Step     | Detector  | Meas. | IF     | Transducer    |
|-----------|-----------|----------|-----------|-------|--------|---------------|
| Frequency | Frequency | Width    |           | Time  | Bandw. |               |
| 9.0 kHz   | 150.0 kHz | 100.0 Hz | QuasiPeak | 1.0 s | 200 Hz | NSLK8126 2008 |
|           |           |          | Average   |       |        |               |
| 150.0 kHz | 30.0 MHz  | 5.0 kHz  | QuasiPeak | 1.0 s | 9 kHz  | NSLK8126 2008 |
|           |           |          | Average   |       |        |               |



**MEASUREMENT RESULT: "TUV-0731-2\_fin"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.160000  | 49.70      | 10.5   | 66         | 15.8   | QP       | N    | GND |
|           | 0.190000  | 58.40      | 10.5   | 64         | 5.6    | QP       | N    | GND |
|           | 3.580000  | 40.90      | 11.1   | 56         | 15.1   | QP       | N    | GND |
|           | 5.870000  | 36.20      | 11.2   | 60         | 23.8   | QP       | N    | GND |

**MEASUREMENT RESULT: "TUV-0731-2\_fin2"**

| 7/31/2016 | Frequency | Level      | Transd | Limit      | Margin | Detector | Line | PE  |
|-----------|-----------|------------|--------|------------|--------|----------|------|-----|
|           | MHz       | dB $\mu$ V | dB     | dB $\mu$ V | dB     |          |      |     |
|           | 0.195000  | 43.50      | 10.5   | 54         | 10.3   | AV       | N    | GND |
|           | 0.265000  | 36.60      | 10.6   | 51         | 14.7   | AV       | N    | GND |
|           | 3.440000  | 32.10      | 11.1   | 46         | 13.9   | AV       | N    | GND |
|           | 5.920000  | 28.70      | 11.2   | 50         | 21.3   | AV       | N    | GND |

## Appendix B.4: Test Plots of Radiated Emission

### C Mode

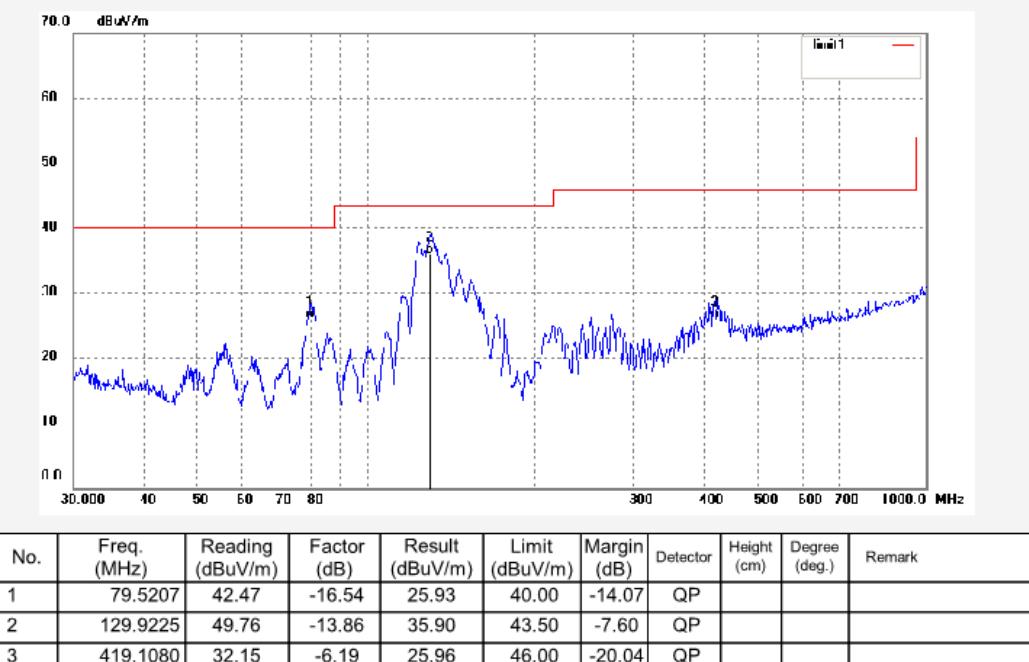


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Site: 2# Chamber  
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Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2912                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 5V        |
| Test item: Radiation Test                          | Date: 16/07/27/            |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: Charging                                     | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |
| Note:                                              |                            |





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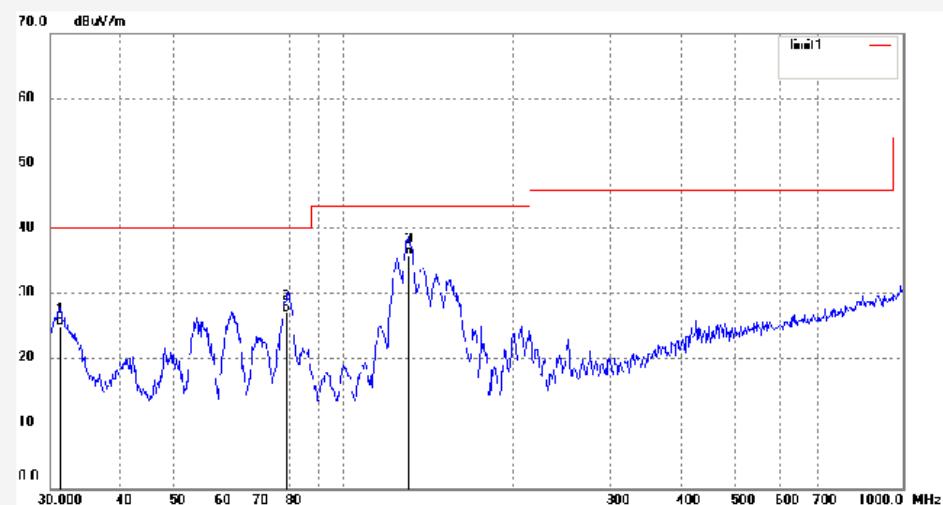
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: Igwade #2913  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C /48 %  
EUT: Kosmobits & Code Gamer  
Mode: Charging  
Model: 620141  
Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG

Polarization: Vertical  
Power Source: DC 5V  
Date: 16/07/27/  
Time:  
Engineer Signature: LGWADE  
Distance: 3m

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 31.1798        | 34.27               | -9.27          | 25.00              | 40.00             | -15.00         | QP       |                |                  |        |
| 2   | 79.2425        | 43.59               | -16.56         | 27.03              | 40.00             | -12.97         | QP       |                |                  |        |
| 3   | 130.8369       | 49.67               | -13.90         | 35.77              | 43.50             | -7.73          | QP       |                |                  |        |



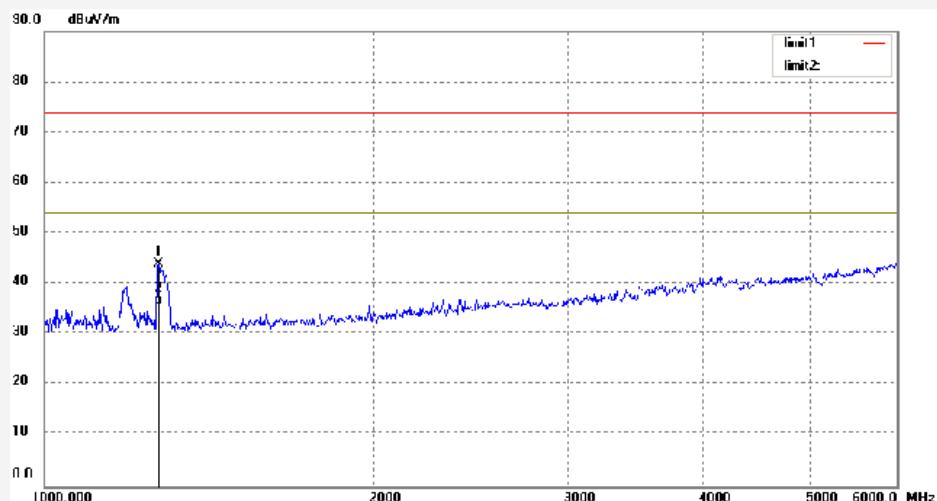
ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
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|                   |                                      |                     |            |
|-------------------|--------------------------------------|---------------------|------------|
| Job No.:          | Igwade #2914                         | Polarization:       | Vertical   |
| Standard:         | FCC Class B 3M Radiated              | Power Source:       | DC 5V      |
| Test item:        | Radiation Test                       | Date:               | 2016/07/27 |
| Temp.( C)/Hum.(%) | 23 C / 48 %                          | Time:               |            |
| EUT:              | Kosmobits & Code Gamer               | Engineer Signature: | LGWADE     |
| Mode:             | Charging                             | Distance:           | 3m         |
| Model:            | 620141                               |                     |            |
| Manufacturer:     | Franckh-Kosmos Verlags-GmbH & Co. KG |                     |            |

Note:



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|-------------|------------------|-------------|-----------------|----------------|-------------|----------|-------------|---------------|--------|
| 1   | 1271.371    | 56.28            | -12.26      | 44.02           | 74.00          | -29.98      | peak     |             |               |        |
| 2   | 1271.371    | 48.23            | -12.26      | 35.97           | 54.00          | -18.03      | AVG      |             |               |        |



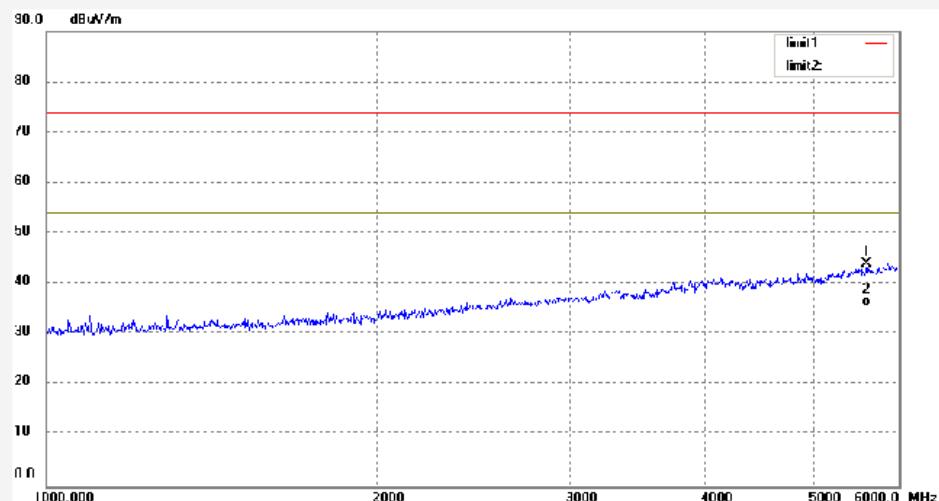
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
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Fax:+86-0755-26503396

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| Job No.: Igwade #2915                              | Polarization: Horizontal   |
| Standard: FCC Class B 3M Radiated                  | Power Source: DC 5V        |
| Test item: Radiation Test                          | Date: 2016/07/27           |
| Temp.( C)/Hum.(%) 23 C / 48 %                      | Time:                      |
| EUT: Kosmobits & Code Gamer                        | Engineer Signature: LGWADE |
| Mode: Charging                                     | Distance: 3m               |
| Model: 620141                                      |                            |
| Manufacturer: Franckh-Kosmos Verlags-GmbH & Co. KG |                            |

Note:



| No. | Freq.<br>(MHz) | Reading<br>(dBuV/m) | Factor<br>(dB) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|----------------|---------------------|----------------|--------------------|-------------------|----------------|----------|----------------|------------------|--------|
| 1   | 5605.076       | 42.44               | 1.44           | 43.88              | 74.00             | -30.12         | peak     |                |                  |        |
| 2   | 5605.076       | 34.25               | 1.44           | 35.69              | 54.00             | -18.31         | AVG      |                |                  |        |