

### CENTRE OF TESTING SERVICE INTERNATIONAL

**OPERATE ACCORDING TO ISO/IEC 17025** 

# FCC/IC ID TEST REPORT

TEST REPORT NUMBER: CGZ3110929-00805-EFI



CENTRE OF TESTING SERVICE CO., LTD.

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.





### TEST REPORT For FCC ID 47 CFR PART 15 OCT, 2010 RSS-210 Issue 8 Report Reference No. ...... CGZ3110929-00805-EFI Testing Laboratory Name ...... CETRE OF TESTING SERVICE CO., LTD. Guangzhou, China. Testing location/ procedure ...... Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method Test specification ..... Standard ...... 47 CFR PART 15 OCT, 2010, RSS-210 Issue 8,RSS-Gen Issue 3 Test Report Form No. ...... CTSEMC-1.0 TRF Originator ...... CENTRE OF TESTING SERVICE CO., LTD Master TRF...... Dated 2009-01 CENTRE OF TESTING SERVICE CO., LTD. All rights reserved. This publication may be reproduced in whole or in part for non-commercial purposes as long as the CENTRE OF TESTING SERVICE CO., LTD is acknowledged as copyright owner and source of the material. CENTRE OF TESTING SERVICE CO., LTD takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context. Test item description...... EVO<sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360<sup>®</sup> Trade Mark..... / Manufacturer...... Datel Design & Development,Inc Model/Type reference..... AS197 Ratings...... DC 3.0V by battery Operating Frequency ....... 2402MMHz ~2482.00MHz/ GFSK Result ...... Positive

Compiled by:

Supervised by:

Approved by:

Violet Lee / File administrators

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Vincent yao / Manager

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### FCCID-TEST REPORT

Test Report No. : CGZ3110929-00805-EFI 

8 Oct 2011
Date of issue

| Type / Model       | AS197   |
|--------------------|---|
| EUT                | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup>           |
| Applicant          | Datel Design & Development, Inc.  |
| AddressTelephone   | 33 N. Garden Avenue Suite 900 Clearwater, FL 33755 United States. +(727) 431-0651 |
| Fax                |   |
| Contact            | Kenneth Tarolla   |
| Manufacturer       | DATEL DIRECT LIMITED  |
| Address            | Stafford Road, Stone, staffordshire, UK, ST15,0DG                                 |
| Telephone          | /   |
| Fax                | /   |
| Contact            | Emma.murray   |
| Test report holder | Datel Design & Development, Inc.  |
| Address            | 33 N. Garden Avenue Suite 900 Clearwater, FL 33755 United States.                 |
| Telephone          | +(727) 431-0651   |
| Fax                |   |
| Contact            | Kenneth Tarolla   |

### Test Result according to the standards on page 3: Positive

The test report merely corresponds to the test sample.

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### 1.TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 OCT, 2010
- RSS-210 Issue 8
- RSS-Gen Issue 3
- ANSI C63.4-2009

### 2.SUMMARY

### 2.1 GENERAL REMARKS

| Date of receipt of test sample | 29 Sept 2011       |  |  |
|--------------------------------|--------------------|--|--|
|                                |                    |  |  |
| Testing commenced on           | 30 Sept~8 Oct 2011 |  |  |
|                                |                    |  |  |
| Testing concluded on           | 8 Oct 2011         |  |  |

#### 2.2 FINAL ASSESSMENT

The FCC requirements pertaining to the technical standards and tested operation modes are

- fulfilled.
- □ **not** fulfilled.

The equipment under test

- fulfils the FCC requirements cited on page 3.
- does not fulfil the FCC requirements cited on page 3.

### 3.EQUIPMENT UNDER TEST

### 3.1 Power supply system utilised

Power supply voltage : ■ DC 3.0V For TX, AC 120V For RX(XBOX360)

### 3.2 Short description of the Equipment under Test (EUT)

Number of tested samples: 1

Serial number: Prototype

### 3.3 EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

- □ Standby
- ☐ TX- Y position
- ☐ TX- Zposition
- TX- X position
- RX Normal link

Operation mode 1: TX-X Position Low (2402MHz) , TX-X Position Middle (2442MHz),

TX-X Position High (2482MHz)

Operation mode 2: RX Normal Link

Note: TX -X position and RX Normal Link of EUT is the worst case, so only these test results be recorded in the test report.

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### 3.4 EUT configuration

### 3.4.1. Description of configuration (EUT)

| Description           | : | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|-----------------------|---|---|
| Model Number          | : | AS197   |
| Operation frequency   | : | 2402~ 2482 MHz ISM Band   |
| Radio Technology      | : | GFSK  |
| Modulation Technology | : | GFSK modulation   |
| Antenna               | : | Integral antenna, met requirement of FCC 15.203                         |

### 3.4.2. Tested Supporting System Details

N/A

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### 4.TEST ENVIRONMENT

### 4.1 Address of the test laboratory

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

### 4.2 Test facility

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

CNAS-Lab Code: L3394

CENTRE OF TESTING SERVICE CO., LTD has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

### IC-Registration No.: 8374A

The 3m Alternate Test Site of CENTRE OF TESTING SERVICE CO., LTD has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374A on June 6, 2011.

### FCC-Registration No.: 971995

CENTRE OF TESTING SERVICE CO., LTD, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration No.791995, July 21, 2009.

### 4.3 Environmental conditions

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

| Temperature:          | 15~35 ° C  |
|-----------------------|------------|
|                       |            |
| Humidity:             | 25~75 %    |
|                       |            |
| Atmospheric pressure: | 86~106 kPa |

### 4.4 Definitions of symbols used in this test report

- - The black square indicates that the listed condition, standard or equipment is applicable for this report.
- □ The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

### 4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the CTS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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### 4.6 Measurement Uncertainty

| Test Item               | Frequency Range | Uncertainty | Note |
|-------------------------|-----------------|-------------|------|
| Conduction disturbance  | 150kHz~30MHz    | ±1.22dB     | (1)  |
| Power disturbance       | 30MHz~300MHz    | ±1.38dB     | (1)  |
| Radiation emission (3m) | 30MHz~300MHz    | ±3.14dB     | (1)  |
|                         | 300MHz~1000MHz  | ±3.18dB     | (1)  |

<sup>(1).</sup> This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 5. Summary of standards and results

### 5.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

| EMISSION                                   |  |        |  |  |  |  |
|--|--|--------|--|--|--|--|
| Description of Test Item Standard Result   |  |        |  |  |  |  |
| Conducted Emission Test                    | RSS-Gen:7.2.4<br>FCC Part 15 : 15.207<br>ANSI C63.4-2009                                     | PASSED |  |  |  |  |
| Radiated Emission Test                     | RSS-Gen:7.2<br>RSS-210 A2.9<br>FCC Part 15 C: 15.249<br>FCC Part 15 : 109<br>ANSI C63.4-2009 | PASSED |  |  |  |  |
| Band Edge Compliance Test                  | RSS-210 Annex 8<br>FCC Part 15 C: 15.249<br>ANSI C63.4-2009                                  | PASSED |  |  |  |  |
| 99% Bandwidth                              | RSS-210 Annex 8<br>RSS-Gen 4.6.1   | PASSED |  |  |  |  |
| N/A is an abbreviation for Not Applicable. |  |        |  |  |  |  |

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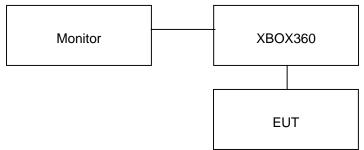


### 6. Power Line Conducted Emission Test

### **6.1.Test Equipment**

| Conduc | Conducted Disturbance |                 |           |            |           |  |  |
|--------|-----------------------|-----------------|-----------|------------|-----------|--|--|
| Item   | Test Equipment        | Manufacturer    | Model No. | Serial No. | Last Cal. |  |  |
| 1      | EMI Test Receiver     | ROHDE & SCHWARZ | ESHS10    | 842884/012 | 2010/12   |  |  |
| 2      | Artificial Mains      | ROHDE & SCHWARZ | ESH3-Z5   | 832479/025 | 2010/12   |  |  |
| 3      | Artificial Mains      | ROHDE & SCHWARZ | ESH3-Z5   | 832479/026 | 2010/12   |  |  |
| 4      | Pulse Limiter         | ROHDE & SCHWARZ | ESHSZ2    | 100301     | 2010/12   |  |  |
| 5      | EMI Test Software     | ROHDE & SCHWARZ | ESK1      | N/A        | 2010/12   |  |  |

### 6.2. Block Diagram of Test Setup



(EUT: EVO<sup>TM</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360<sup>®</sup>)

### 6.3. Power Line Conducted Emission Test Limits

Standard: RSS-Gen: 7.2.4, FCC Part 15: 15.207, ANSI C63.4-2009

|                 |  | Maximum RF Line Voltage |               |  |
|-----------------|--|-------------------------|---------------|--|
| Frequency       |  | Quasi-Peak Level        | Average Level |  |
| requeriey       |  | $dB(\mu V)$ $dB(\mu V)$ |               |  |
| 150kHz ~ 500kHz |  | 66 ~ 56*                | 56 ~ 46*      |  |
| 500kHz ~ 5MHz   |  | 56                      | 46            |  |
| 5MHz ~ 30MHz    |  | 60                      | 50            |  |

Notes: 1. \* Decreasing linearly with logarithm of frequency.

### 6.4.Test Procedure

The XBOX Power connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#1). Power on the PC and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC Part 15C on Conducted Emission Test.

### 6.5. Power Line Conducted Emission Test Results

Passed Test Result

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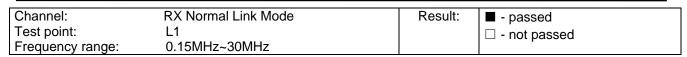
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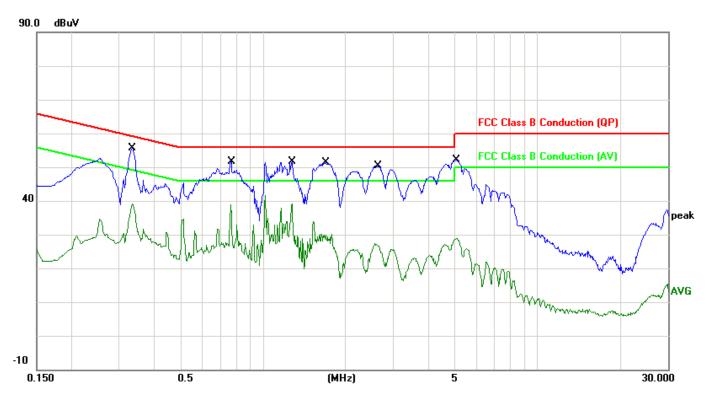
<sup>2.</sup> The lower limit shall apply at the transition frequencies.







| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |  |
|---------------------|---|--|
| Firm Name           | Datel Design & Development,Inc  |  |
| Operating Condition | DC 3.0V for TX AC 120V for RX   |  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |  |
| Test Date:          | 30 Sept~8 Oct 2011  |  |
| Operator            | Peter   |  |
| MODEL NO            | AS197   |  |



| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Detector |
|-----|--------------------|----------------|-------------------|-----------------|-----------------|----------------|----------|
| 1   | 0.3340             | 9.99           | 44.54             | 54.53           | 59.35           | -4.82          | QP       |
| 2   | 0.3340             | 9.99           | 31.05             | 41.04           | 49.35           | -8.31          | AVG      |
| 3   | 0.7700             | 10.10          | 36.22             | 46.32           | 56.00           | -9.68          | QP       |
| 4   | 0.7700             | 10.10          | 26.61             | 36.71           | 46.00           | -9.29          | AVG      |
| 5   | 1.2780             | 10.11          | 40.44             | 50.55           | 56.00           | -5.45          | QP       |
| 6   | 1.2780             | 10.11          | 31.75             | 41.86           | 46.00           | -4.14          | AVG      |
| 7   | 1.7020             | 10.09          | 36.99             | 47.08           | 56.00           | -8.92          | QP       |
| 8   | 1.7020             | 10.09          | 18.99             | 29.08           | 46.00           | -16.92         | AVG      |
| 9   | 2.6500             | 10.05          | 39.94             | 49.99           | 56.00           | -6.01          | QP       |
| 10  | 2.6500             | 10.05          | 19.60             | 29.65           | 46.00           | -16.35         | AVG      |
| 11  | 5.0780             | 10.12          | 41.56             | 51.68           | 60.00           | -8.32          | QP       |
| 12  | 5.0780             | 10.12          | 21.64             | 31.76           | 50.00           | -18.24         | AVG      |

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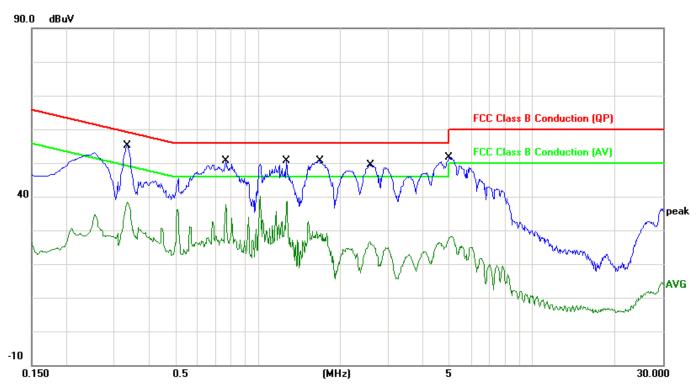
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| Channel:         | RX Normal link Mode | Result: | ■ - passed     |
|------------------|---------------------|---------|----------------|
| Test point:      | L2                  |         | □ - not passed |
| Frequency range: | 0.15MHz~30MHz       |         |                |

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.7V for TX AC 120V for RX   |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |



| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Detector |
|-----|--------------------|----------------|-------------------|-----------------|-----------------|----------------|----------|
| 1   | 0.3340             | 9.99           | 44.86             | 54.85           | 59.35           | -4.50          | QP       |
| 2   | 0.3340             | 9.99           | 31.46             | 41.45           | 49.35           | -7.90          | AVG      |
| 3   | 0.7660             | 10.10          | 36.44             | 46.54           | 56.00           | -9.46          | QP       |
| 4   | 0.7660             | 10.10          | 27.96             | 38.06           | 46.00           | -7.94          | AVG      |
| 5   | 1.2740             | 10.11          | 39.83             | 49.94           | 56.00           | -6.06          | QP       |
| 6   | 1.2740             | 10.11          | 30.36             | 40.47           | 46.00           | -5.53          | AVG      |
| 7   | 1.6860             | 10.09          | 37.12             | 47.21           | 56.00           | -8.79          | QP       |
| 8   | 1.6860             | 10.09          | 18.11             | 28.20           | 46.00           | -17.80         | AVG      |
| 9   | 2.5700             | 10.05          | 40.05             | 50.10           | 56.00           | -5.90          | QP       |
| 10  | 2.5700             | 10.05          | 20.27             | 30.32           | 46.00           | -15.68         | AVG      |
| 11  | 5.0019             | 10.12          | 41.35             | 51.47           | 60.00           | -8.53          | QP       |
| 12  | 5.0019             | 10.12          | 21.36             | 31.48           | 50.00           | -18.52         | AVG      |

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### 7. Radiated disturbance (electric field)

### 7.1.Test Equipment

| Radiated disturbance (electric field) |                   |                 |            |           |         |  |  |  |
|---------------------------------------|-------------------|-----------------|------------|-----------|---------|--|--|--|
| Item                                  | Test Equipment    | Manufacturer    | Serial No. | Last Cal. |         |  |  |  |
| 1                                     | EMI Test Receiver | ROHDE & SCHWARZ | ESCI       | 100868    | 2010/12 |  |  |  |
| 2                                     | Biconical Antenna | ROHDE & SCHWARZ | HK116      | 100221    | 2010/12 |  |  |  |
| 3                                     | Log per Antenna   | ROHDE & SCHWARZ | HL223      | 100226    | 2010/12 |  |  |  |
| 4                                     | Log per Antenna   | ROHDE & SCHWARZ | HL050      | 100186    | 2010/12 |  |  |  |
| 5                                     | Signal analyzer   | ROHDE & SCHWARZ | FSIQ26     | 100311    | 2010/12 |  |  |  |
| 6                                     | Loop Antenna      | A.R.A           | PLA-1030/B | 1030      | 2010/12 |  |  |  |

### 7.2.Block Diagram of Test Setup

7.2.1 Block Diagram of connection between EUT and simulators

| TX  |  |
|-----|--|
| EUT |  |

(EUT: EVO<sup>TM</sup> WIRELESS CONTROLLER FOR USE WITH XBOX  $360^{\circ}$ )

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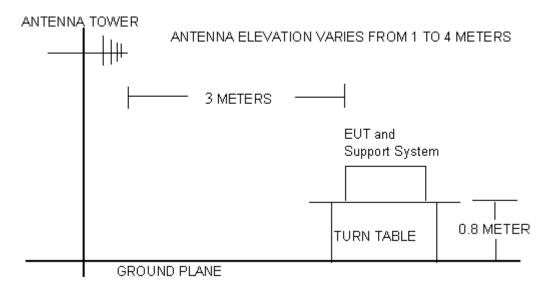
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### 7.2.2 Anechoic Chamber Setup Diagram



### 7.3. Radiated Emission Limit:

### Standard:FCC 15.249, FCC 15.209, RSS-Gen:7.2,RSS-210 A2.9

Except as provided in paragraph (a) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

| Fundamental Frequency (MHz) | Field Strength of Fundamental (mV/m) | Field Strength of Harmonics (µV/m) |
|-----------------------------|--------------------------------------|------------------------------------|
| 902-928                     | 50                                   | 500                                |
| 2400-2483.5                 | 50                                   | 500                                |
| 5725-5875                   | 50                                   | 500                                |
| 24000-24250                 | 250                                  | 2500                               |

| FRE   | FREQUENCY  |       | DISTANCE | FIELD STRENGTHS LIMIT      |          |  |
|-------|------------|-------|----------|----------------------------|----------|--|
|       | MHz        |       | Meters   | μV/m                       | dB(μV)/m |  |
| 0.009 | ~          | 0.490 | 3        |                            | 63.0     |  |
| 0.490 |            | 1.705 | 3        |                            | 43.0     |  |
| 1.705 |            | 30    | 3        |                            | 49.5     |  |
| 30    | ~          | 88    | 3        | 100                        | 40.0     |  |
| 88    | ~          | 216   | 3        | 150                        | 43.5     |  |
| 216   | ~          | 960   | 3        | 200                        | 46.0     |  |
| 960   | ~          | 1000  | 3        | 500                        | 54.0     |  |
| Λ     | Above 1000 |       | 2        | Other:74.0 dB(μV)/m (Peak) |          |  |
| A     | Above 1000 |       | 3        | 54.0 dB(μV)/m (Average)    |          |  |

Remark: (1) Emission level  $dB\mu V = 20 \log Emission level \mu V/m$ 

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

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#### 7.4.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on section 7.5

### 7.5. Radiated Emission Test Results

### PASSED.

The frequency range from 9KHz~30MHz,30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated.

Please see the following pages.

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Test Mode: TX –X Position Mode Result: □ - passed □ - not passed

| No. | Frequency (MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|-----|-----------------|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1   | 0.1683          | 18.50          | 6.74              | 25.24             | 63.00             | -37.76         | QP   |
| 2   | 0.3272          | 18.52          | 6.68              | 25.20             | 63.00             | -37.80         | QP   |
| 3   | 0.7072          | 18.57          | 5.14              | 23.71             | 43.00             | -19.29         | QP   |
| 4   | 1.6177          | 18.65          | 4.51              | 23.16             | 43.00             | -19.84         | QP   |
| 5   | 2.8083          | 18.71          | 12.10             | 30.81             | 49.50             | -18.69         | QP   |
| 6   | 5.8277          | 18.88          | 11.18             | 30.06             | 49.50             | -19.44         | QP   |

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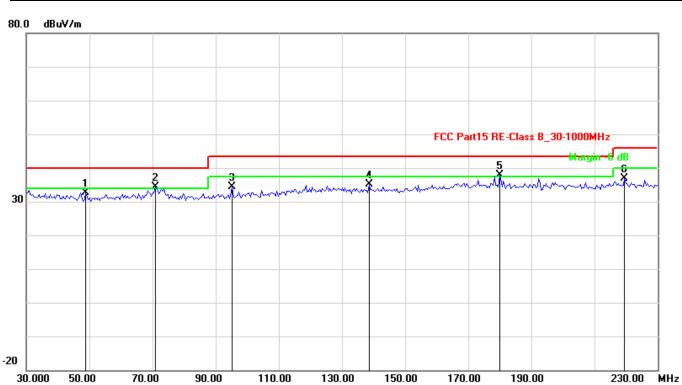
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| Channel:         | TX –X Position Mode | Result: | ■ - passed                            |
|------------------|---------------------|---------|---------------------------------------|
| Test point:      | Horizontal          |         | □ - not passed                        |
| Frequency range: | 30MHz~1000MHz       |         | , , , , , , , , , , , , , , , , , , , |

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.0V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test distance       | 3 Meter   |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |



| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|-----|--------------------|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1   | 48.8377            | 5.32           | 27.26             | 32.58             | 40.00             | -7.42          | QP   |
| 2   | 70.8818            | 5.11           | 29.33             | 34.44             | 40.00             | -5.56          | QP   |
| 3   | 95.3307            | 5.01           | 29.25             | 34.26             | 43.50             | -9.24          | QP   |
| 4   | 138.6172           | 6.43           | 28.59             | 35.02             | 43.50             | -8.48          | QP   |
| 5   | 179.8998           | 7.45           | 30.37             | 37.82             | 43.50             | -5.68          | QP   |
| 6   | 219.5792           | 7.92           | 28.89             | 36.81             | 46.00             | -9.19          | QP   |

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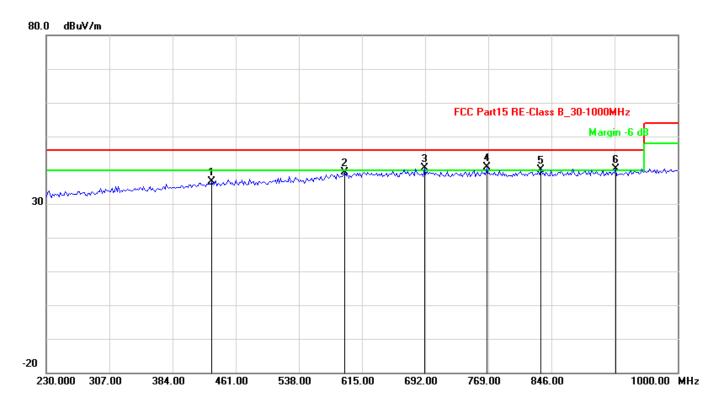
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| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|-----|--------------------|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1   | 432.1443           | 8.25           | 28.35             | 36.60             | 46.00             | -9.40          | QP   |
| 2   | 594.1683           | 9.27           | 30.16             | 39.43             | 46.00             | -6.57          | QP   |
| 3   | 691.3828           | 10.28          | 30.37             | 40.65             | 46.00             | -5.35          | QP   |
| 4   | 766.9940           | 10.25          | 30.51             | 40.76             | 46.00             | -5.24          | QP   |
| 5   | 833.3467           | 10.18          | 29.91             | 40.09             | 46.00             | -5.91          | QP   |
| 6   | 924.3888           | 10.50          | 29.76             | 40.26             | 46.00             | -5.74          | QP   |

Note: 1. Emission level=Read level + Factor

2. Factor=Antenna factor + Cable loss

3. Margin=Level-Limit.

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| Channel:         | TX –X Position Mode Low 2402MHz | Result: | ■ - passed     |
|------------------|---------------------------------|---------|----------------|
| Test point:      | Horizontal                      |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                    |         |                |

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.7V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test distance       | 3 Meter   |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |

| No.     | Frequency<br>(MHz)                                      | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |  |
|---------|---|----------------|-------------------|-------------------|-------------------|----------------|------|--|
| 1       | 2402.000  | 17.79          | 65.09             | 82.88             | 114.00            | -31.12         | peak |  |
| 2       | 2402.000  | 17.79          | 57.62             | 75.41             | 94.00             | -18.59         | AVG  |  |
| 3       | 2829.659  | 19.63          | 33.90             | 53.53             | 74.00             | -20.47         | peak |  |
| 4       | 2829.659  | 19.63          | 20.90             | 40.53             | 54.00             | -13.47         | AVG  |  |
| 5       | 5981.964  | 24.80          | 32.08             | 56.88             | 74.00             | -17.12         | peak |  |
| 6       | 5981.964  | 24.80          | 20.08             | 44.88             | 54.00             | -9.12          | AVG  |  |
| 7       | 6929.860  | 25.15          | 35.21             | 60.36             | 74.00             | -13.64         | peak |  |
| 8       | 6929.860  | 25.15          | 23.21             | 48.36             | 54.00             | -5.64          | AVG  |  |
| 9       | 8693.387  | 27.06          | 29.26             | 56.32             | 74.00             | -17.68         | peak |  |
| 10      | 8693.387  | 27.06          | 17.26             | 44.32             | 54.00             | -9.68          | AVG  |  |
| 11      | 10434.870   | 28.86          | 30.79             | 59.65             | 74.00             | -14.35         | peak |  |
| 12      | 10434.870   | 28.86          | 18.79             | 47.65             | 54.00             | -6.35          | AVG  |  |
| 13      | 11691.383   | 29.63          | 30.75             | 60.38             | 74.00             | -13.62         | peak |  |
| 14      | 11691.383   | 29.63          | 18.75             | 48.38             | 54.00             | -5.62          | AVG  |  |
| Remark: | Remark: Other frequency mini margin all >10 dB of Limit |                |                   |                   |                   |                |      |  |

Note: 1. Emission level=Read level + Factor

- 2. Factor=Antenna factor + Cable loss
- 3. Margin=Level-Limit.

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| Channel:         | TX –X Position Mode Middle 2442MHz | Result: | ■ - passed     |
|------------------|------------------------------------|---------|----------------|
| Test point:      | Horizontal                         |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                       |         |                |

| No.       | Frequency   | Factor | Reading | Level    | Limit    | Margin | Det. |  |
|-----------|---|--------|---------|----------|----------|--------|------|--|
|           | (MHz)   | (dB)   | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |      |  |
| 1         | 2442.000  | 17.97  | 63.99   | 81.96    | 114.00   | -32.04 | peak |  |
| 2         | 2442.000  | 17.97  | 57.06   | 75.03    | 94.00    | -18.97 | AVG  |  |
| 3         | 2873.747  | 19.82  | 34.25   | 54.07    | 74.00    | -19.93 | peak |  |
| 4         | 2873.747  | 19.82  | 22.25   | 42.07    | 54.00    | -11.93 | AVG  |  |
| 5         | 5474.950  | 24.05  | 30.48   | 54.53    | 74.00    | -19.47 | peak |  |
| 6         | 5474.950  | 24.05  | 18.48   | 42.53    | 54.00    | -11.47 | AVG  |  |
| 7         | 6621.242  | 25.04  | 34.32   | 59.36    | 74.00    | -14.64 | peak |  |
| 8         | 6621.242  | 25.04  | 22.32   | 47.36    | 54.00    | -6.64  | AVG  |  |
| 9         | 8186.373  | 26.92  | 30.01   | 56.93    | 74.00    | -17.07 | peak |  |
| 10        | 8186.373  | 26.92  | 18.01   | 44.93    | 54.00    | -9.07  | AVG  |  |
| 11        | 10038.076   | 29.25  | 30.55   | 59.80    | 74.00    | -14.20 | peak |  |
| 12        | 10038.076   | 29.25  | 18.55   | 47.80    | 54.00    | -6.20  | AVG  |  |
| 13        | 11603.206   | 29.46  | 30.82   | 60.28    | 74.00    | -13.72 | peak |  |
| 14        | 11603.206   | 29.46  | 18.82   | 48.28    | 54.00    | -5.72  | AVG  |  |
| Remark: 0 | Remark: Other frequency mini margin all >10 dB of Limit |        |         |          |          |        |      |  |

Note: 1. Emission level=Read level + Factor

- 2. Factor=Antenna factor + Cable loss
- 3. Margin=Level-Limit.

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| Channel:         | TX –X Position Mode High 2482MHz | Result: | ■ - passed     |
|------------------|----------------------------------|---------|----------------|
| Test point:      | Horizontal                       |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                     |         |                |

| No.       | Frequency   | Factor | Reading | Level    | Limit    | Margin | Det. |  |
|-----------|---|--------|---------|----------|----------|--------|------|--|
|           | (MHz)   | (dB)   | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |      |  |
| 1         | 2482.000  | 18.14  | 64.13   | 82.27    | 114.00   | -31.73 | peak |  |
| 2         | 2482.000  | 18.14  | 57.44   | 75.58    | 94.00    | -18.42 | AVG  |  |
| 3         | 2829.659  | 19.63  | 33.61   | 53.24    | 74.00    | -20.76 | peak |  |
| 4         | 2829.659  | 19.63  | 21.61   | 41.24    | 54.00    | -12.76 | AVG  |  |
| 5         | 5430.862  | 23.99  | 30.21   | 54.20    | 74.00    | -19.80 | peak |  |
| 6         | 5430.862  | 23.99  | 18.21   | 42.20    | 54.00    | -11.80 | AVG  |  |
| 7         | 6995.992  | 25.17  | 35.52   | 60.69    | 74.00    | -13.31 | peak |  |
| 8         | 6995.992  | 25.17  | 23.52   | 48.69    | 54.00    | -5.31  | AVG  |  |
| 9         | 9398.798  | 28.00  | 30.67   | 58.67    | 74.00    | -15.33 | peak |  |
| 10        | 9398.798  | 28.00  | 18.67   | 46.67    | 54.00    | -7.33  | AVG  |  |
| 11        | 10060.120   | 29.23  | 30.61   | 59.84    | 74.00    | -14.16 | peak |  |
| 12        | 10060.120   | 29.23  | 18.61   | 47.84    | 54.00    | -6.16  | AVG  |  |
| 13        | 11779.559   | 29.80  | 29.78   | 59.58    | 74.00    | -14.42 | peak |  |
| 14        | 11779.559   | 29.80  | 17.78   | 47.58    | 54.00    | -6.42  | AVG  |  |
| Remark: 0 | Remark: Other frequency mini margin all >10 dB of Limit |        |         |          |          |        |      |  |

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss

3. Margin=Level-Limit.

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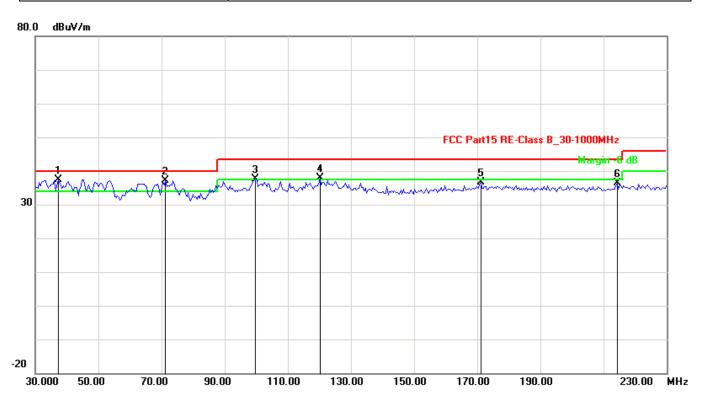
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| Channel:         | TX –X Position Mode       | Result: | ■ - passed     |
|------------------|---------------------------|---------|----------------|
| Test point:      | Vertical                  |         | □ - not passed |
| Frequency range: | 30-230MHz and 230-1000MHz |         |                |

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.0V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test distance       | 3 Meter   |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |



| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|-----|--------------------|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1   | 37.2144            | 5.89           | 30.57             | 36.46             | 40.00             | -3.54          | QP   |
| 2   | 71.2826            | 5.10           | 30.91             | 36.01             | 40.00             | -3.99          | QP   |
| 3   | 99.7395            | 5.14           | 32.61             | 37.75             | 43.50             | -5.75          | QP   |
| 4   | 120.1804           | 6.50           | 31.40             | 37.90             | 43.50             | -5.60          | QP   |
| 5   | 171.0822           | 7.41           | 29.29             | 36.70             | 43.50             | -6.80          | QP   |
| 6   | 214.3687           | 7.58           | 28.88             | 36.46             | 43.50             | -7.04          | QP   |

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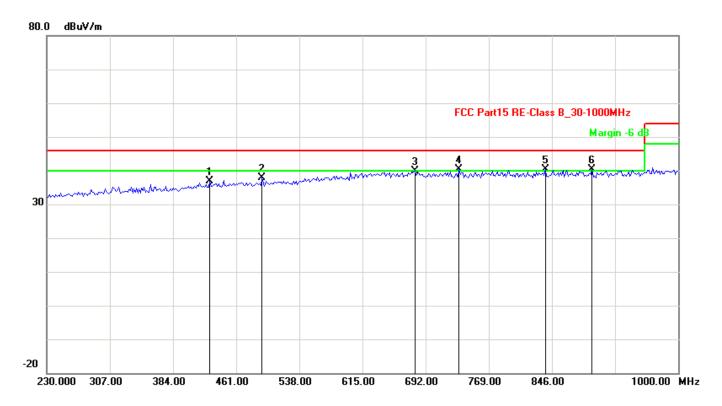
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| No. | Frequency<br>(MHz) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|-----|--------------------|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1   | 429.0581           | 8.25           | 28.68             | 36.93             | 46.00             | -9.07          | QP   |
| 2   | 492.3246           | 8.52           | 29.39             | 37.91             | 46.00             | -8.09          | QP   |
| 3   | 679.0381           | 10.18          | 29.71             | 39.89             | 46.00             | -6.11          | QP   |
| 4   | 733.0461           | 10.25          | 30.12             | 40.37             | 46.00             | -5.63          | QP   |
| 5   | 837.9760           | 10.20          | 30.25             | 40.45             | 46.00             | -5.55          | QP   |
| 6   | 895.0701           | 10.50          | 29.93             | 40.43             | 46.00             | -5.57          | QP   |

Note: 1. Emission level=Read level + Factor

2. Factor=Antenna factor + Cable loss

3.Margin=Level- Limit.

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| Channel:         | TX –X Position Mode Low 2402MHz | Result: | ■ - passed     |
|------------------|---------------------------------|---------|----------------|
| Test point:      | Vertical                        |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                    |         |                |

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.0V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test distance       | 3 Meter   |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |

| No.     | Frequency<br>(MHz)                                      | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Det. |
|---------|---|----------------|-------------------|-------------------|-------------------|----------------|------|
| 1       | 2402.000  | 17.81          | 58.69             | 76.50             | 114.00            | -37.50         | peak |
| 2       | 2402.000  | 17.81          | 52.13             | 69.94             | 94.00             | -24.06         | AVG  |
| 1       | 2895.792  | 19.91          | 33.38             | 53.29             | 74.00             | -20.71         | peak |
| 2       | 2895.792  | 19.91          | 21.38             | 41.29             | 54.00             | -12.71         | AVG  |
| 3       | 5915.832  | 24.71          | 30.92             | 55.63             | 74.00             | -18.37         | peak |
| 4       | 5915.832  | 24.71          | 17.92             | 42.63             | 54.00             | -11.37         | AVG  |
| 5       | 6973.948  | 25.16          | 33.53             | 58.69             | 74.00             | -15.31         | peak |
| 6       | 6973.948  | 25.16          | 18.53             | 43.69             | 54.00             | -10.31         | AVG  |
| 7       | 8737.475  | 27.07          | 29.79             | 56.86             | 74.00             | -17.14         | peak |
| 8       | 8737.475  | 27.07          | 18.79             | 45.86             | 54.00             | -8.14          | AVG  |
| 9       | 10523.046   | 28.78          | 31.69             | 60.47             | 74.00             | -13.53         | peak |
| 10      | 10523.046   | 28.78          | 17.69             | 46.47             | 54.00             | -7.53          | AVG  |
| 11      | 11823.647   | 29.88          | 31.87             | 61.75             | 74.00             | -12.25         | peak |
| 12      | 11823.647   | 29.88          | 19.87             | 49.75             | 54.00             | -4.25          | AVG  |
| Remark: | Remark: Other frequency mini margin all >10 dB of Limit |                |                   |                   |                   |                |      |

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| Channel:         | TX –X Position Mode Middle 2442MHz | Result: | ■ - passed     |
|------------------|------------------------------------|---------|----------------|
| Test point:      | Vertical                           |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                       |         |                |

| No.       | Frequency   | Factor | Reading | Level    | Limit    | Margin | Det. |
|-----------|---|--------|---------|----------|----------|--------|------|
|           | (MHz)   | (dB)   | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |      |
| 1         | 2442.000  | 17.97  | 59.06   | 77.03    | 114.00   | -36.97 | peak |
| 2         | 2442.000  | 17.97  | 52.14   | 70.11    | 94.00    | -23.89 | AVG  |
| 3         | 2873.747  | 19.82  | 32.83   | 52.65    | 74.00    | -21.35 | peak |
| 4         | 2873.747  | 19.82  | 20.83   | 40.65    | 54.00    | -13.35 | AVG  |
| 5         | 5056.112  | 23.43  | 28.72   | 52.15    | 74.00    | -21.85 | peak |
| 6         | 5056.112  | 23.43  | 16.72   | 40.15    | 54.00    | -13.85 | AVG  |
| 7         | 5893.788  | 24.67  | 31.49   | 56.16    | 74.00    | -17.84 | peak |
| 8         | 5893.788  | 24.67  | 19.49   | 44.16    | 54.00    | -9.84  | AVG  |
| 9         | 6995.992  | 25.17  | 32.74   | 57.91    | 74.00    | -16.09 | peak |
| 10        | 6995.992  | 25.17  | 20.74   | 45.91    | 54.00    | -8.09  | AVG  |
| 11        | 9266.533  | 27.71  | 28.37   | 56.08    | 74.00    | -17.92 | peak |
| 12        | 9266.533  | 27.71  | 16.37   | 44.08    | 54.00    | -9.92  | AVG  |
| 13        | 11140.281   | 28.58  | 29.20   | 57.78    | 74.00    | -16.22 | peak |
| 14        | 11140.281   | 28.58  | 17.20   | 45.78    | 54.00    | -8.22  | AVG  |
| Remark: 0 | Remark: Other frequency mini margin all >10 dB of Limit |        |         |          |          |        |      |

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss

3. Margin=Level-Limit.

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| Channel:         | TX –X Position Mode High 2482MHz | Result: | ■ - passed     |
|------------------|----------------------------------|---------|----------------|
| Test point:      | Vertical                         |         | □ - not passed |
| Frequency range: | 1GHz-26.5GHz                     |         |                |

| No.       | Frequency   | Factor | Reading | Level    | Limit    | Margin | Det. |
|-----------|---|--------|---------|----------|----------|--------|------|
|           | (MHz)   | (dB)   | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |      |
| 1         | 2482.000  | 18.14  | 58.69   | 76.83    | 114.00   | -37.17 | peak |
| 2         | 2482.000  | 18.14  | 51.75   | 69.89    | 94.00    | -24.11 | AVG  |
| 3         | 2873.747  | 19.82  | 32.90   | 52.72    | 74.00    | -21.28 | peak |
| 4         | 2873.747  | 19.82  | 20.90   | 40.72    | 54.00    | -13.28 | AVG  |
| 5         | 5386.774  | 23.92  | 28.18   | 52.10    | 74.00    | -21.90 | peak |
| 6         | 5386.774  | 23.92  | 16.18   | 40.10    | 54.00    | -13.90 | AVG  |
| 7         | 6995.992  | 25.17  | 32.62   | 57.79    | 74.00    | -16.21 | peak |
| 8         | 6995.992  | 25.17  | 20.62   | 45.79    | 54.00    | -8.21  | AVG  |
| 9         | 9861.723  | 28.99  | 29.67   | 58.66    | 74.00    | -15.34 | peak |
| 10        | 9861.723  | 28.99  | 17.67   | 46.66    | 54.00    | -7.34  | AVG  |
| 11        | 10501.002   | 28.80  | 29.95   | 58.75    | 74.00    | -15.25 | peak |
| 12        | 10501.002   | 28.80  | 17.95   | 46.75    | 54.00    | -7.25  | AVG  |
| 13        | 11977.956   | 30.18  | 29.58   | 59.76    | 74.00    | -14.24 | peak |
| 14        | 11977.956   | 30.18  | 17.58   | 47.76    | 54.00    | -6.24  | AVG  |
| Remark: 0 | Remark: Other frequency mini margin all >10 dB of Limit |        |         |          |          |        |      |

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss

3. Margin=Level-Limit.

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### 8. Band Edge Compliance test

### 8.1. Test Equipment

| Band Edge Compliance test |                   |                 |           |            |           |
|---------------------------|-------------------|-----------------|-----------|------------|-----------|
| Item                      | Test Equipment    | Manufacturer    | Model No. | Serial No. | Last Cal. |
| 1                         | EMI Test Receiver | ROHDE & SCHWARZ | ESCI      | 10868      | 2010/12   |
| 2                         | Log per Antenna   | ROHDE & SCHWARZ | HL050     | 100186     | 2010/12   |
| 3                         | Signal analyzer   | ROHDE & SCHWARZ | FSIQ26    | 100311     | 2010/12   |

### 8.2. Test Information

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.0V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test distance       | 3 Meter   |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |

### 8.3. Test procedure

- 1. The EUT operates at hopping-off test mode. The lowest or highest channels are tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
- 2. Max hold the trace of the setp 1,and the EUT operates at hopping-on test mode to verify the largest spurious emissions power.

### 8.4. Test Results

### PASSED.

The EUT operates at hopping-off test mode. The lowest and highest channels are tested to verify the band edge emissions.

| Took Mada    | Channel          | Test Result<br>Highest Emission<br>(dBuv/m) |       |          |         |
|--------------|------------------|---|-------|----------|---------|
| Test Mode    | Marked Frequency | Horizontal                                  |       | Vertical |         |
|              |                  | Peak Avera                                  |       | Peak     | Average |
| Low Channel  | 2390MHz          | 41.69                                       | 31.63 | 41.39    | 31.05   |
|              | 2400MHz          | 59.97                                       | 48.08 | 54.78    | 45.27   |
| High Channel | 2483.5MHz        | 67.27                                       | 51.72 | 62.72    | 51.03   |
|              | 2500MHz          | 40.86                                       | 31.38 | 40.50    | 31.48   |

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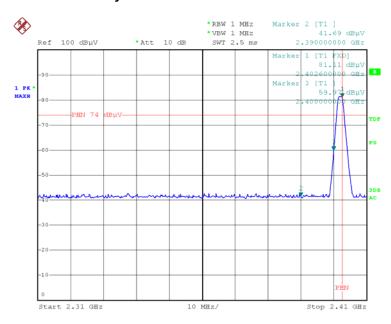
Report No.: CGZ3110929-00805-EFI





### Band Edges(CH Low) Detector mode:Peak

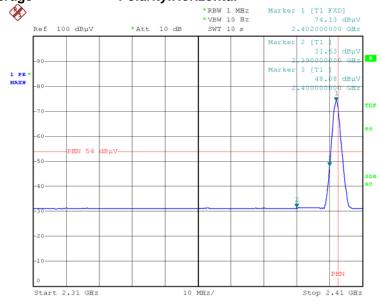
### **Polarity:Horizontal**



Date: 30.SEP.2011 14:28:57

### Band Edges(CH Low) Detector mode: Average

### **Polarity:Horizontal**



Date: 30.SEP.2011 14:33:06

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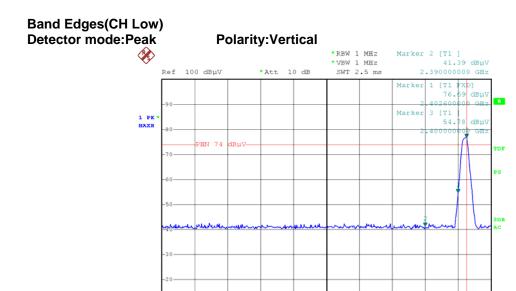
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Date: 30.SEP.2011 14:29:52

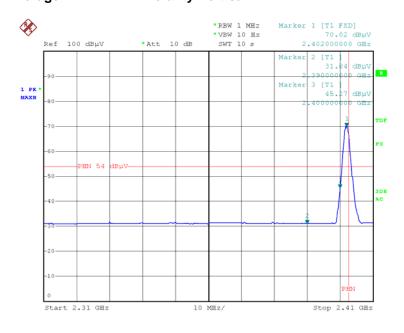
Start 2.31 GHz

### Band Edges(CH Low) Detector mode:Average

### Polarity:Vertical

10 MHz/

Stop 2.41 GHz



Date: 30.SEP.2011 14:31:55

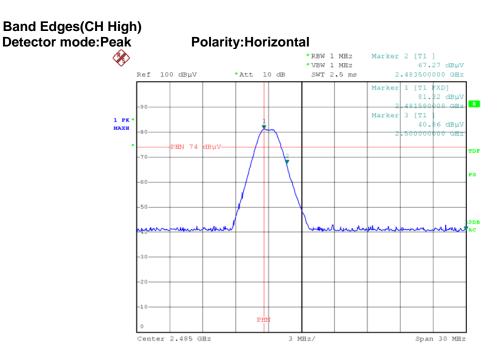
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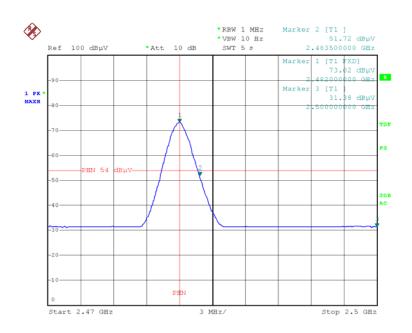




Date: 30.SEP.2011 14:24:53

### Band Edges(CH High) Detector mode: Average

### Polarity:Horizontal



Date: 30.SEP.2011 14:19:37

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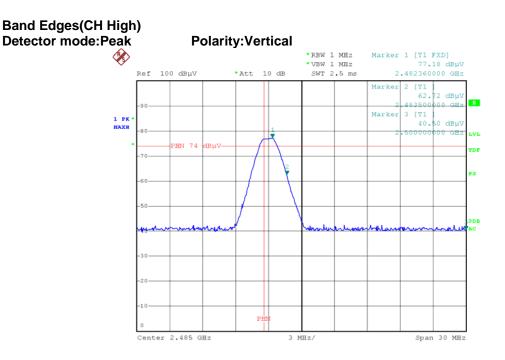
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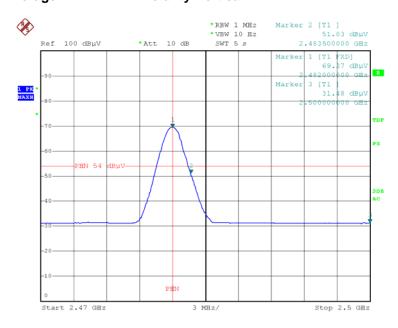




Date: 30.SEP.2011 14:25:32

### Band Edges(CH High) Detector mode: Average

### Polarity: Vertical



Date: 30.SEP.2011 14:21:23

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### 9. 99% bandwidth

### 9.1 Test procedure

According to RSS-210 Annex 8 and RSS-Gen 4.6.1 The transmitter output is connected to the spectrum analyzer. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual. The sweep time is coupled.

### 9.2. Test Equipment

| Band Edge Compliance test |                   |                 |           |            |           |
|---------------------------|-------------------|-----------------|-----------|------------|-----------|
| Item                      | Test Equipment    | Manufacturer    | Model No. | Serial No. | Last Cal. |
| 1                         | EMI Test Receiver | ROHDE & SCHWARZ | ESCI      | 10868      | 2010/12   |
| 2                         | Log per Antenna   | ROHDE & SCHWARZ | HL050     | 100186     | 2010/12   |
| 3                         | Signal analyzer   | ROHDE & SCHWARZ | FSIQ26    | 100311     | 2010/12   |

### 9.3. Test Information

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |
|---------------------|---|
| Firm Name           | Datel Design & Development,Inc  |
| Operating Condition | DC 3.0V for TX  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |
| Test Date:          | 30 Sept~8 Oct 2011  |
| Operator            | Peter   |
| MODEL NO            | AS197   |

### 9.4. Test Results

### PASSED.

| Channel | Frequency<br>(MHz) | Bandwidth<br>(MHz) |
|---------|--------------------|--------------------|
| Low     | 2402               | 1.395              |
| Middle  | 2442               | 1.422              |
| High    | 2482               | 1.395              |

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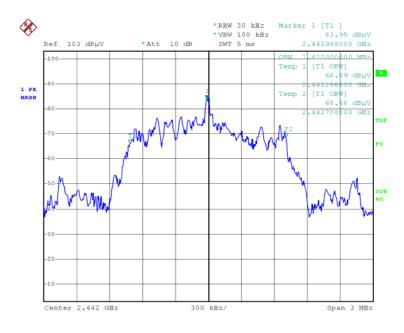


#### 99% Bandwidth 2402 MHz



Date: 8.OCT.2011 09:49:33

### 99% Bandwidth 2442 MHz



Date: 8.OCT.2011 09:51:38

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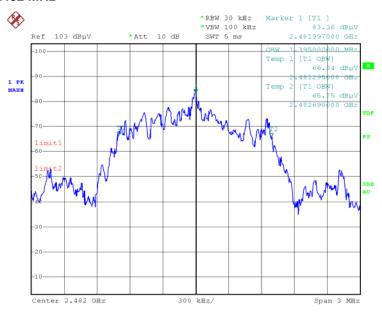
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#### 99% Bandwidth 2482 MHz



Date: 8.OCT.2011 09:52:52

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### 10. 20 dB Bandwidth test

### 10.1. Test Equipment

| 20 dB Bandwidth test |                   |                 |           |            |           |  |  |
|----------------------|-------------------|-----------------|-----------|------------|-----------|--|--|
| Item                 | Test Equipment    | Manufacturer    | Model No. | Serial No. | Last Cal. |  |  |
| 1                    | EMI Test Receiver | ROHDE & SCHWARZ | ESCI      | 10868      | 2010/12   |  |  |
| 2                    | Log per Antenna   | ROHDE & SCHWARZ | HL050     | 100186     | 2010/12   |  |  |
| 3                    | Signal analyzer   | ROHDE & SCHWARZ | FSIQ26    | 100311     | 2010/12   |  |  |

### 10.2. Test Information

| EUT                 | EVO <sup>™</sup> WIRELESS CONTROLLER FOR USE WITH XBOX 360 <sup>®</sup> |  |  |
|---------------------|---|--|--|
| Firm Name           | Datel Design & Development,Inc  |  |  |
| Operating Condition | DC 3.0V for TX  |  |  |
| Test Condition      | Ambient Temperature: 25°C Humidity: 56%                                 |  |  |
| Test Date:          | 30 Sept~8 Oct 2011  |  |  |
| Operator            | Peter   |  |  |
| MODEL NO            | AS197   |  |  |

### 10.3. Test Results

### PASSED.

The testing data was attached in the next pages.

| Channel | Frequency<br>(MHz) | 20dB Bandwidth<br>(MHz) |
|---------|--------------------|-------------------------|
| Low     | 2402               | 1.53                    |
| Middle  | 2442               | 1.52                    |
| High    | 2482               | 1.56                    |

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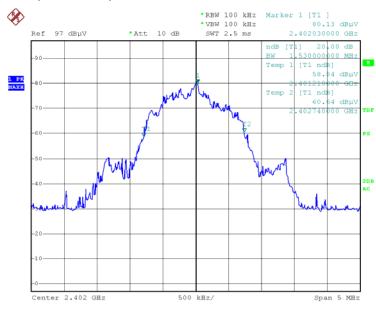
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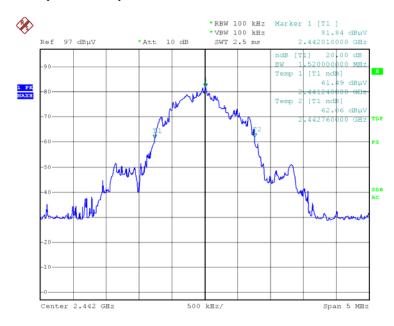


### 20 dB Bandwidth (2402MHz)



Date: 14.0CT.2011 09:37:34

### 20 dB Bandwidth (2442MHz)



Date: 14.0CT.2011 09:38:30

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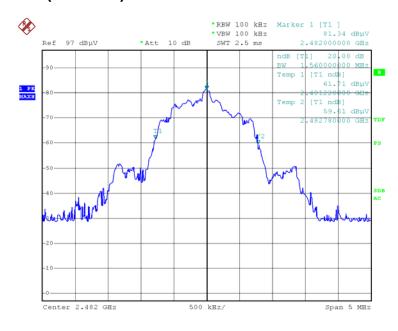
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### 20 dB Bandwidth (2482MHz)



Date: 14.0CT.2011 09:39:34

### 11. Deviation to test specifications [NONE]

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