

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

## INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

**Product Name:** Wireless Cable Gateway

**Brand Name:** Castlenet

**Model No.:** CBV3843ZU1M, CBW3843GU1M,  
CBV383ZU1M, CBW383GU1M

**Model Difference:** CBW3843GU1M: without VOIP  
CBV383ZU1M, CBW383GU1M: for marketing  
purpose used

**FCC ID:** RK9-CBV3843ZU1M

**Report No.:** E2/2016/60032

**Issue Date:** Jun. 30, 2016

**FCC Rule Part:** §15.247, Cat: DTS

**Prepared for:** CastleNet Technology Inc.  
No.64, Chung-Shan Rd., Tu-Cheng District,  
New Taipei City, 23680 Taiwan

**Prepared by:** SGS Taiwan Ltd.  
Electronics & Communication Laboratory  
No.2, Keji 1st Rd., Guishan District, Taoyuan  
City, Taiwan 333



**Note:** This report shall not be reproduced except in full, without the written approval of SGS Taiwan Ltd. This document may be altered or revised by SGS Taiwan Ltd. personnel only, and shall be noted in the revision section of the document.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## VERIFICATION OF COMPLIANCE

**Applicant:** CastleNet Technology Inc.  
No.64, Chung-Shan Rd., Tu-Cheng District, New Taipei City,  
23680 Taiwan

**Product Name:** Wireless Cable Gateway

**Brand Name:** Castlenet

**Model No.:** CBV3843ZU1M, CBW3843GU1M, CBV383ZU1M,  
CBW383GU1M

**Model Difference:** CBW3843GU1M: without VOIP  
CBV383ZU1M, CBW383GU1M: for marketing purpose used

**FCC ID:** RK9-CBV3843ZU1M

**File Number:** E2/2016/60032

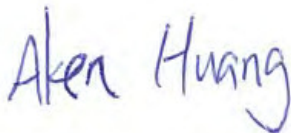
**Date of Test:** Jun. 04, 2016 ~ Jun. 24, 2016

**Date of EUT Received:** Jun. 04, 2016

**We hereby certify that:**

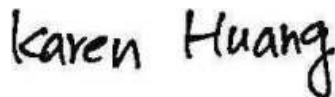
The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

**Test By:****Date:**

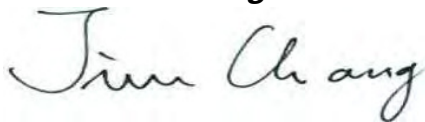
Jun. 30, 2016

---

**Aken Huang / Engineer****Prepared By:****Date:**

Jun. 30, 2016

---

**Karen Huang / Clerk****Approved By:****Date:**

Jun. 30, 2016

---

**Jim Chang / Asst. Manager**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Revision History

| Report Number | Revision | Description                  | Issue Date    |
|---------------|----------|------------------------------|---------------|
| E2/2016/60032 | Rev.00   | Initial creation of document | Jun. 30, 2016 |
|               |          |                              |               |
|               |          |                              |               |
|               |          |                              |               |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Contents

|          |                                                    |           |
|----------|----------------------------------------------------|-----------|
| <b>1</b> | <b>GENERAL INFORMATION.....</b>                    | <b>6</b>  |
| 1.1      | Product description .....                          | 6         |
| 1.2      | Product Feature of Equipment Under Test .....      | 7         |
| 1.3      | Test Methodology of Applied Standards.....         | 8         |
| 1.4      | Test Facility .....                                | 8         |
| 1.5      | Special Accessories .....                          | 8         |
| 1.6      | Equipment Modifications .....                      | 8         |
| <b>2</b> | <b>SYSTEM TEST CONFIGURATION .....</b>             | <b>9</b>  |
| 2.1      | EUT Configuration .....                            | 9         |
| 2.2      | EUT Exercise.....                                  | 9         |
| 2.3      | Test Procedure.....                                | 9         |
| 2.4      | Measurement Results Explanation Example .....      | 9         |
| 2.5      | Configuration of Tested System.....                | 10        |
| <b>3</b> | <b>SUMMARY OF TEST RESULTS .....</b>               | <b>11</b> |
| <b>4</b> | <b>DESCRIPTION OF TEST MODES.....</b>              | <b>12</b> |
| 4.1      | Operated in 2400 ~ 2483.5MHz Band .....            | 12        |
| 4.2      | The Worst Test Modes and Channel Details.....      | 12        |
| <b>5</b> | <b>MEASUREMENT UNCERTAINTY.....</b>                | <b>15</b> |
| <b>6</b> | <b>CONDUCTED EMISSION TEST .....</b>               | <b>16</b> |
| 6.1      | Standard Applicable .....                          | 16        |
| 6.2      | Measurement Equipment Used .....                   | 16        |
| 6.3      | EUT Setup .....                                    | 16        |
| 6.4      | Test SET-UP (Block Diagram of Configuration) ..... | 17        |
| 6.5      | Measurement Procedure .....                        | 17        |
| 6.6      | Measurement Result .....                           | 17        |
| <b>7</b> | <b>DUTY CYCLE OF TEST SIGNAL.....</b>              | <b>20</b> |
| 7.1      | Duty Cycle Test Signal Measurement Result.....     | 21        |
| <b>8</b> | <b>PEAK OUTPUT POWER MEASUREMENT .....</b>         | <b>23</b> |
| 8.1      | Standard Applicable .....                          | 23        |
| 8.2      | Measurement Equipment Used .....                   | 24        |
| 8.3      | Test Set-up.....                                   | 24        |
| 8.4      | Measurement Procedure .....                        | 24        |
| 8.5      | Measurement Result .....                           | 25        |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|           |                                                                        |            |
|-----------|------------------------------------------------------------------------|------------|
| <b>9</b>  | <b>6dB BANDWIDTH MEASUREMENT .....</b>                                 | <b>30</b>  |
| 9.1       | Standard Applicable .....                                              | 30         |
| 9.2       | Measurement Equipment Used .....                                       | 30         |
| 9.3       | Test Set-up.....                                                       | 30         |
| 9.4       | Measurement Procedure .....                                            | 30         |
| 9.5       | Measurement Result .....                                               | 31         |
| <b>10</b> | <b>CONDUCTED BAND EDGES AND SPURIOUS EMISSION MEASUREMENT .....</b>    | <b>44</b>  |
| 10.1      | Standard Applicable .....                                              | 44         |
| 10.2      | Measurement Equipment Used .....                                       | 44         |
| 10.3      | Test SET-UP .....                                                      | 44         |
| 10.4      | Measurement Procedure .....                                            | 45         |
| 10.5      | Measurement Result .....                                               | 45         |
| <b>11</b> | <b>RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT.....</b>        | <b>62</b>  |
| 11.1      | Standard Applicable .....                                              | 62         |
| 11.2      | Measurement Equipment Used: .....                                      | 63         |
| 11.3      | Test SET-UP .....                                                      | 64         |
| 11.4      | Measurement Procedure .....                                            | 65         |
| 11.5      | Field Strength Calculation .....                                       | 66         |
| 11.6      | Test Results of Radiated Spurious Emissions form 9 kHz to 30 MHz ..... | 66         |
| 11.7      | Measurement Result.....                                                | 66         |
| <b>12</b> | <b>PEAK POWER SPECTRAL DENSITY .....</b>                               | <b>105</b> |
| 12.1      | Standard Applicable .....                                              | 105        |
| 12.2      | Measurement Equipment Used .....                                       | 105        |
| 12.3      | Test Set-up.....                                                       | 105        |
| 12.4      | Measurement Procedure .....                                            | 105        |
| 12.5      | Measurement Result .....                                               | 106        |
| <b>13</b> | <b>ANTENNA REQUIREMENT .....</b>                                       | <b>113</b> |
| 13.1      | Standard Applicable .....                                              | 113        |
| 13.2      | Antenna Connected Construction.....                                    | 113        |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

# 1 GENERAL INFORMATION

## 1.1 Product description

General:

|                              |                                                                                 |                                               |
|------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------|
| Product Name:                | Wireless Cable Gateway                                                          |                                               |
| Brand Name:                  | Castlenet                                                                       |                                               |
| Model No.:                   | CBV3843ZU1M, CBW3843GU1M, CBV383ZU1M, CBW383GU1M                                |                                               |
| Model Difference:            | CBW3843GU1M: without VOIP<br>CBV383ZU1M, CBW383GU1M: for marketing purpose used |                                               |
| Product SW/HW version:       | N/A/ N/A                                                                        |                                               |
| Radio SW/HW version:         | N/A/ N/A                                                                        |                                               |
| Test SW Version:             | N/A                                                                             |                                               |
| RF power setting in TEST SW: | N/A                                                                             |                                               |
| RJ45 LAN CABLE:              | Model No.: JY01-C066, Supplier: EKSON                                           |                                               |
| RJ11 PHONE CABLE:            | Model No.: PF01-C097, Supplier: EKSON                                           |                                               |
| Power Supply:                | 12Vdc from Adapter                                                              |                                               |
|                              | Adapter:                                                                        | Model No.: ADS0306-W120250,<br>Supplier: AOEM |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## WLAN 2.4GHz:

| Wi-Fi               | Frequency Range   | Channels                                                                                                                                                         | Rated Power                        | Type of Emission        | Modulation Technology |
|---------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------|-----------------------|
| 11b/g               | 2412-2462         | 11                                                                                                                                                               | b: 8.08dBm<br>g: 24.09dBm          | b: 8M11G1D<br>g:15M1D1D | DSSS, OFDM            |
| 11n                 | HT20<br>2412-2462 | 11                                                                                                                                                               | HT20:25.45dBm<br>(MIMO Chain 0+1)  | HT20:16M3D1D            | OFDM                  |
| 11n                 | HT40<br>2422-2452 | 7                                                                                                                                                                | HT40: 25.20dBm<br>(MIMO Chain 0+1) | HT40:35M7D1D            | OFDM                  |
| Antenna Designation |                   | PIFA Antenna, Supplier: Taiwan Anjie Electronics Co. Ltd.<br>1. PartI No.: AJDP1J-W0009, Gain: 3.91dBi (Main)<br>2. PartI No.: AJDP1J-W0007, Gain: 3.14dBi (Aux) |                                    |                         |                       |
| Modulation type:    |                   | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM                                                                                                  |                                    |                         |                       |
| Transition Rate:    |                   | 802.11 b: 1/2/5.5/11 Mbps<br>802.11 g: 6/9/12/18/24/36/48/54 Mbps<br>802.11 n_20MHz: 6.5 – 144.4Mbps<br>802.11 n_40MHz: 13.5 – 300Mbps                           |                                    |                         |                       |

## 1.2 Product Feature of Equipment Under Test

The equipment under Test (Hereafter Called: EUT) is supporting, Wi-Fi 802.11 a/b/g/n & ac features, and below is details of information.

| Product Feature     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Product Name:       | Wireless Cable Gateway                                                          |
| Brand Name:         | Castlenet                                                                       |
| Model No.:          | CBV3843ZU1M, CBW3843GU1M, CBV383ZU1M, CBW383GU1M                                |
| Model Difference:   | CBW3843GU1M: without VOIP<br>CBV383ZU1M, CBW383GU1M: for marketing purpose used |
| FCC ID:             | RK9-CBV3843ZU1M                                                                 |
| Wi-Fi Specification | 802.11a/b/g/n/ac                                                                |

**Note:** The above EUT information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

### 1.3 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247

FCC KDB 558074 D01 DTS Meas. Guidance

FCC KDB 662911 D01 Multiple Transmitter Output

ANSI C63.10:2013

Note:

1. All test items have been performed and record as per the above standards.
2. The composite system is compliance with FCC Subpart B is authorized under a DoC procedure.

### 1.4 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd.,  
Guishan District, Taoyuan City, Taiwan 333

(TAF code 0513)

FCC Registration Numbers are: 735305

### 1.5 Special Accessories

There are no special accessories used while test was conducted.

### 1.6 Equipment Modifications

There was no modification incorporated into the EUT.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz. The CISPR Quasi-Peak and Average detector mode is employed according to §15.207. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

### 2.4 Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

#### Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Following shows an offset computation example with cable loss 1.3dB and 10dB attenuator.

#### SISO Offset:

= RF cable loss (dB)+ attenuation factor(dB) dB =11.3dB

#### MIMO Offset:

= RF cable loss (dB)+ attenuation factor(dB) dB =14.3dB

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission

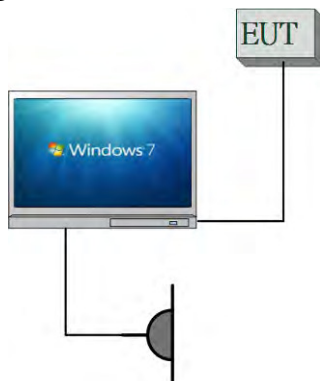


Fig. 2-2 Conducted (Antenna Port) Configuration Emission

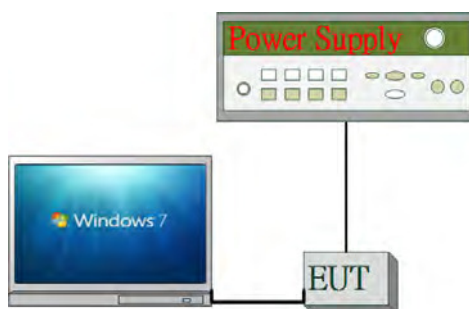


Fig. 2-3 Conduction Emission

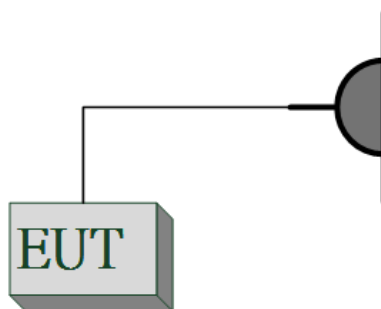


Table 2-1 Equipment Used in Tested System

| Item | Equipment          | Mfr/Brand | Model/Type No. | Series No. | Data Cable | Power Cord  |
|------|--------------------|-----------|----------------|------------|------------|-------------|
| 1.   | WLAN Test Software | N/A       | N/A            | N/A        | N/A        | N/A         |
| 2.   | Notebook           | Lenovo    | L420           | LR-7HXZA   | N/A        | Un-shielded |
| 3.   | DC Power Supply    | HP        | E3640A         | KR93300208 | N/A        | Un-shielded |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

### 3 SUMMARY OF TEST RESULTS

| FCC Rules / IC Rules  | Description Of Test                       | Result    |
|-----------------------|-------------------------------------------|-----------|
| §15.207(a)            | AC Power Line Conducted Emission          | Compliant |
| §15.247(b) (3)        | Peak Output Power                         | Compliant |
| §15.247(a)(2)         | 6dB Emission Bandwidth                    | Compliant |
| §15.247(d)            | Conducted Band Edge and Spurious Emission | Compliant |
| §15.247(d)            | Radiated Band Edge and Spurious Emission  | Compliant |
| §15.247(e)            | Power Spectral Density                    | Compliant |
| §15.203<br>§15.247(b) | Antenna Requirement                       | Compliant |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 4 DESCRIPTION OF TEST MODES

### 4.1 Operated in 2400 ~ 2483.5MHz Band

11 channels are provided for 802.11b, 802.11g and 802.11n HT20

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 1       | 2412 MHz  | 7       | 2442 MHz  |
| 2       | 2417 MHz  | 8       | 2447 MHz  |
| 3       | 2422 MHz  | 9       | 2452 MHz  |
| 4       | 2427 MHz  | 10      | 2457 MHz  |
| 5       | 2432 MHz  | 11      | 2462 MHz  |
| 6       | 2437 MHz  |         |           |

7 channels are provided for 802.11n HT40

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 3       | 2422 MHz  | 7       | 2442 MHz  |
| 4       | 2427 MHz  | 8       | 2447 MHz  |
| 5       | 2432 MHz  | 9       | 2452 MHz  |
| 6       | 2437 MHz  |         |           |

### 4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

# RADIATED EMISSION TEST:

| RADIATED EMISSION TEST (BELOW 1 GHz) |                   |                |            |                  |              |
|--------------------------------------|-------------------|----------------|------------|------------------|--------------|
| MODE                                 | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
| 802.11g                              | 1 to 11           | 1,6,11         | OFDM       | 54               | Main         |

| RADIATED EMISSION TEST (ABOVE 1 GHz) |                   |                |            |                  |              |
|--------------------------------------|-------------------|----------------|------------|------------------|--------------|
| MODE                                 | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
| 802.11b                              | 1 to 11           | 1, 6, 11       | DSSS       | 11               | Main         |
| 802.11g                              | 1 to 11           | 1, 6, 11       | OFDM       | 54               | Main         |
| 802.11n (HT20)                       | 1 to 11           | 1, 6, 11       | OFDM       | MCS 8            | MIMO         |
| 802.11n (HT40)                       | 3 to 9            | 3, 6, 9        | OFDM       | MCS 8            | MIMO         |

## Note:

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11b/g/n WLAN Transmitter for channel Low, Mid and High, the worst case H position was reported.

# ANTENNA PORT CONDUCTED MEASUREMENT:

| CONDUCTED TEST |                   |                |            |                  |              |
|----------------|-------------------|----------------|------------|------------------|--------------|
| MODE           | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
| 802.11b        | 1 to 11           | 1, 6, 11       | DSSS       | 11               | Main         |
| 802.11g        | 1 to 11           | 1, 6, 11       | OFDM       | 54               | Main         |
| 802.11n (HT20) | 1 to 11           | 1, 6, 11       | OFDM       | MCS 8            | MIMO         |
| 802.11n (HT40) | 3 to 9            | 3, 6, 9        | OFDM       | MCS 8            | MIMO         |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Directional gain (MIMO)

The Tx transmission to construct MIMO operation is cyclic delay diversity, and the following deduction to obtain the array gain of MIMO operation is based on the approach given by KDB 662911 D01.

Array gain = 4.77dBi (peak spectral density, conducted spurious emission)

Gain that is combined with different magnitude of two antennas:

(ii) If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream:

- Directional gain may be calculated by using the formulas applicable to equal gain antennas with  $G_{ANT}$  set equal to the gain of the antenna having the highest gain; or,

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

$N_{SS}$  = the number of independent spatial streams of data;

$N_{ANT}$  = the total number of antennas

$g_{j,k} = 10^{G_k/20}$  if the  $k$ th antenna is being fed by spatial stream  $j$ , or zero if it is not;  
 $G_k$  is the gain in dBi of the  $k$ th antenna.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 5 MEASUREMENT UNCERTAINTY

| Test Items                                | Uncertainty                 |
|-------------------------------------------|-----------------------------|
| AC Power Line Conducted Emission          | +/- 2.586 dB                |
| Peak Output Power                         | +/- 0.84 dB                 |
| 6dB Bandwidth                             | +/- 51.33 Hz                |
| 100 KHz Bandwidth Of Frequency Band Edges | +/- 0.84 dB                 |
| Peak Power Density                        | +/- 1.3 dB                  |
| Temperature                               | +/- 0.65 °C                 |
| Humidity                                  | +/- 4.6 %                   |
| DC / AC Power Source                      | DC= +/- 0.13%, AC= +/- 0.2% |

Radiated Spurious Emission:

|                                                              |                            |
|--------------------------------------------------------------|----------------------------|
| Measurement uncertainty<br>(Polarization : <b>Vertical</b> ) | 9kHz-30MHz: +/-2.87dB      |
|                                                              | 30MHz - 180MHz: +/- 3.37dB |
|                                                              | 180MHz -417MHz: +/- 3.19dB |
|                                                              | 0.417GHz-1GHz: +/- 3.19dB  |
|                                                              | 1GHz - 18GHz: +/- 4.04dB   |
|                                                              | 18GHz - 40GHz: +/- 4.04dB  |

|                                                                |                            |
|----------------------------------------------------------------|----------------------------|
| Measurement uncertainty<br>(Polarization : <b>Horizontal</b> ) | 9kHz-30MHz: +/-2.87dB      |
|                                                                | 30MHz - 167MHz: +/- 4.22dB |
|                                                                | 167MHz -500MHz: +/- 3.44dB |
|                                                                | 0.5GHz-1GHz: +/- 3.39dB    |
|                                                                | 1GHz - 18GHz: +/- 4.08dB   |
|                                                                | 18GHz - 40GHz: +/- 4.08dB  |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## 6 CONDUCTED EMISSION TEST

### 6.1 Standard Applicable

Frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

| Frequency range<br>MHz                                                                                                                                                              | Limits<br>dB(μV) |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
|                                                                                                                                                                                     | Quasi-peak       | Average  |
| 0.15 to 0.50                                                                                                                                                                        | 66 to 56         | 56 to 46 |
| 0.50 to 5                                                                                                                                                                           | 56               | 46       |
| 5 to 30                                                                                                                                                                             | 60               | 50       |
| <b>Note</b><br>1.The lower limit shall apply at the transition frequencies<br>2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. |                  |          |

### 6.2 Measurement Equipment Used

| Conducted Emission Test Site |             |                   |                  |              |            |
|------------------------------|-------------|-------------------|------------------|--------------|------------|
| EQUIPMENT<br>TYPE            | MFR         | MODEL<br>NUMBER   | SERIAL<br>NUMBER | LAST<br>CAL. | CAL DUE.   |
| EMI Test Receiver            | R&S         | ESCI 7            | 100950           | 12/12/2015   | 12/11/2016 |
| LISN                         | Schwarzbeck | NSLK 8127         | 8127-648         | 03/11/2016   | 03/10/2017 |
| Coaxial Cables               | N/A         | N30N30-1042-150cm | N/A              | 02/07/2016   | 02/06/2017 |

### 6.3 EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI 63.10:2013.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
3. The LISN was connected with 120Vac/60Hz power source.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

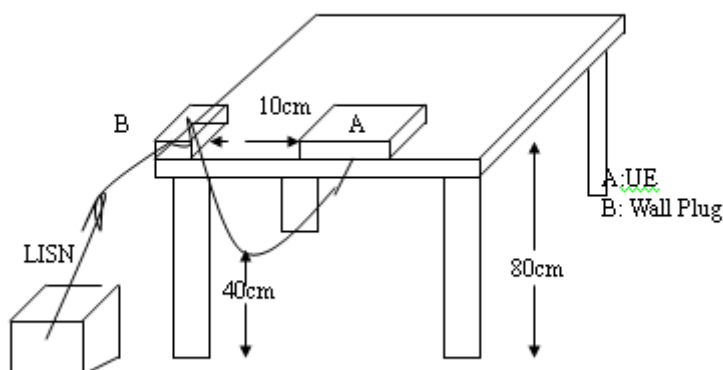
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6.4 Test SET-UP (Block Diagram of Configuration)



## 6.5 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed

## 6.6 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closet to the limit

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

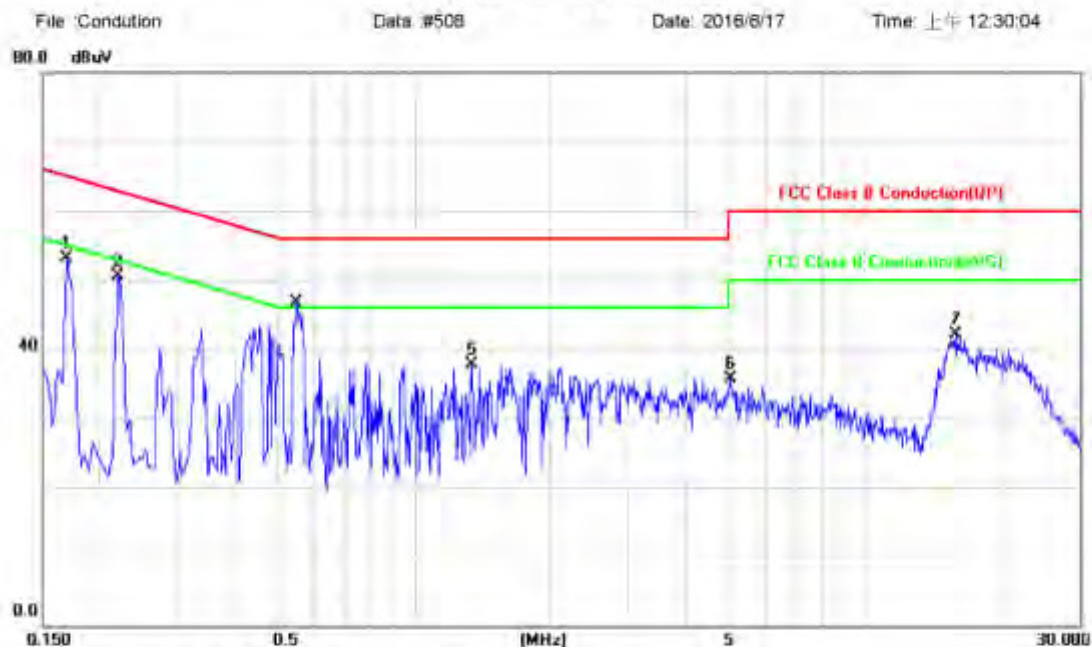
Member of SGS Group

## AC POWER LINE CONDUCTED EMISSION TEST DATA

|                 |                |          |            |
|-----------------|----------------|----------|------------|
| Operation Mode: | operation mode | Test By: | Aken Huang |
|-----------------|----------------|----------|------------|

Site: Conduction Room Phase: **L1** Temperature: 26 °C  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 67 %  
 Mode: CBV3843ZU1M-AC1600  
 Note: ADS0306-W120250

### Conducted Emission



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit | Over   | Detector | Comment |
|-----|-----|---------|---------------|----------------|-------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV        | dBuV  | dB     |          |         |
| 1   |     | 0.1700  | 33.54         | 19.64          | 53.18       | 64.96 | -11.78 | peak     |         |
| 2   |     | 0.2220  | 30.92         | 19.62          | 50.54       | 62.74 | -12.20 | peak     |         |
| 3   |     | 0.5500  | 24.40         | 19.71          | 44.11       | 56.00 | -11.89 | QP       |         |
| 4 * |     | 0.5500  | 17.70         | 19.71          | 37.41       | 46.00 | -8.59  | AVG      |         |
| 5   |     | 1.3460  | 18.26         | 19.53          | 37.79       | 56.00 | -18.21 | peak     |         |
| 6   |     | 5.0380  | 16.20         | 19.42          | 35.62       | 60.00 | -24.38 | peak     |         |
| 7   |     | 15.9020 | 22.36         | 19.74          | 42.10       | 60.00 | -17.90 | peak     |         |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

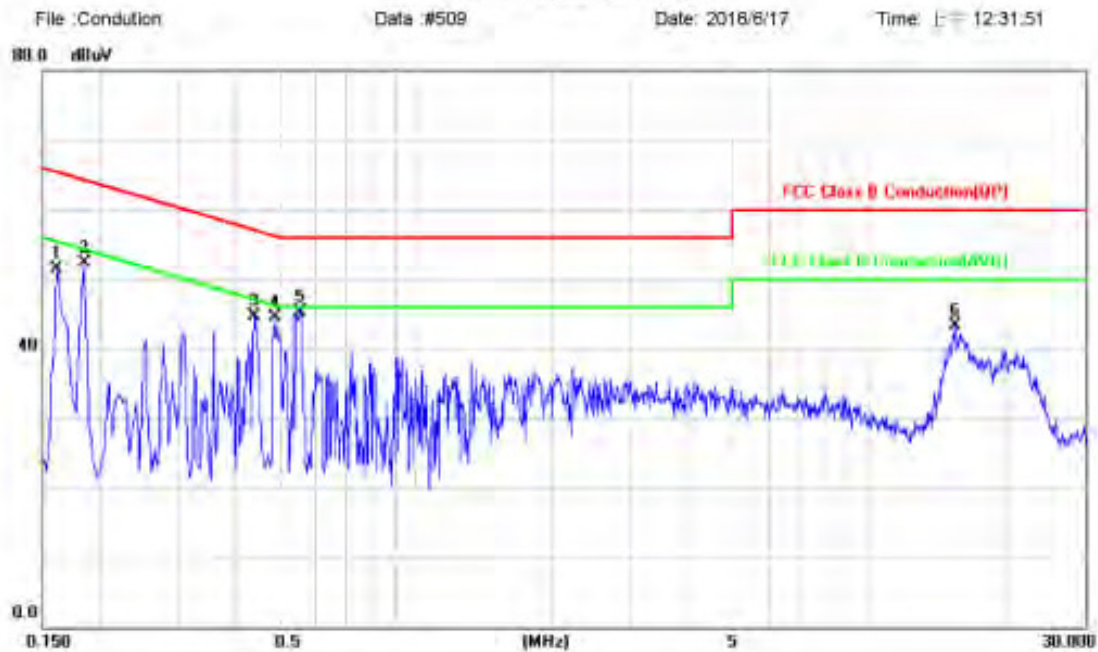
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Site : Conduction Room Phase: **N** Temperature: 26 °C  
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 67 %  
Mode: CBV3843ZU1M-AC1600  
Note: ADS0306-W120250

## Conducted Emission



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit | Over   | Detector | Comment |
|-----|-----|---------|---------------|----------------|-------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV        | dBuV  | dB     |          |         |
| 1   |     | 0.1620  | 31.83         | 19.65          | 51.48       | 65.38 | -13.88 | peak     |         |
| 2   |     | 0.1860  | 32.67         | 19.63          | 52.30       | 64.21 | -11.91 | peak     |         |
| 3   |     | 0.4420  | 25.03         | 19.71          | 44.74       | 57.02 | -12.28 | peak     |         |
| 4   |     | 0.4900  | 24.84         | 19.74          | 44.58       | 56.17 | -11.59 | peak     |         |
| 5 * |     | 0.5580  | 25.64         | 19.71          | 45.35       | 56.00 | -10.65 | peak     |         |
| 6   |     | 15.5180 | 23.41         | 19.80          | 43.21       | 60.00 | -16.79 | peak     |         |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## 7 DUTY CYCLE OF TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### Formula:

$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$

### Measurement Procedure:

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

### Duty Cycle:

|            | Duty Cycle (%) | Duty Factor (dB) |
|------------|----------------|------------------|
| 802.11b    | 95.40          | 0.20             |
| 802.11g    | 95.00          | 0.22             |
| 802.11n_20 | 90.87          | 0.42             |
| 802.11n_40 | 90.87          | 0.42             |

$$b = 95.4\%, g = 95\%, n_{ht\_20} = 90.87\%, n_{ht40} = 90.87\%$$

$$\text{Duty Cycle Factor: } 10 * \log(1/0.954) = 0.2$$

$$\text{Duty Cycle Factor: } 10 * \log(1/0.95) = 0.22$$

$$\text{Duty Cycle Factor: } 10 * \log(1/0.9087) = 0.42$$

$$\text{Duty Cycle Factor: } 10 * \log(1/0.9087) = 0.42$$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

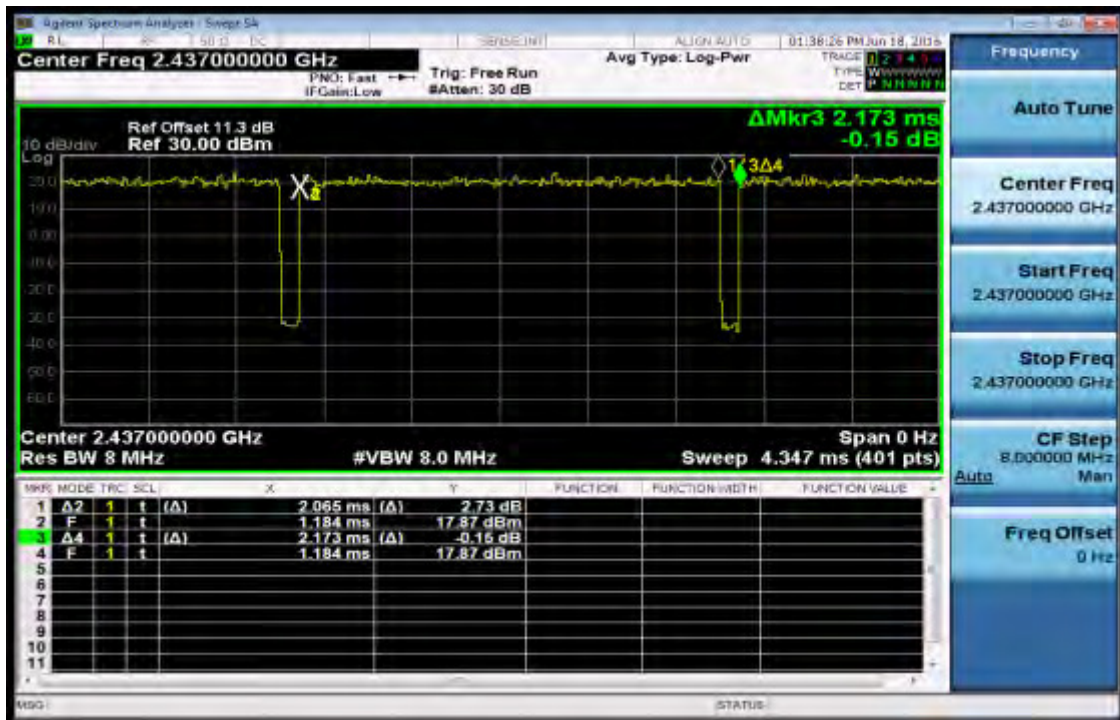
Member of SGS Group

## 7.1 Duty Cycle Test Signal Measurement Result

### 802.11 b



### 802.11 g



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

802.11 n\_20 MHz



802.11 n\_40 MHz



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No. 134, WuKungRoad, NewTaipeiIndustrialPark, WuKuDistrict, NewTaipeiCity, Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 8 PEAK OUTPUT POWER MEASUREMENT

### 8.1 Standard Applicable

For systems using digital modulation in the 2400-2483.5 MHz bands, the limit for peak output power is 1Watt.

If the transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6dBi.

In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of Antenna exceeds 6dBi.

**Note:**

|                 |          |
|-----------------|----------|
| Antenna Gain:   | 3.91 dBi |
| Number Antenna: | 2 pcs    |
| Limit:          | 30 dBm   |

*The antenna gain is grater than 6dBi in MIMO mode the limit reduce as below:*

*Directional gain = gain of antenna element + 10 log (# of TX antenna elements)*

*Effective Legacy Gain (dBi) = 3.91+3.01=6.92dBi*

*Limit: 30dBm – (6.92– 6dBi)=29.08dBm*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

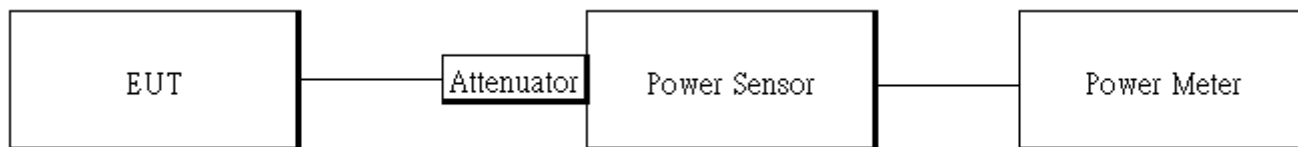
Member of SGS Group

## 8.2 Measurement Equipment Used

| Conducted Emission Test Site |           |                 |               |            |            |
|------------------------------|-----------|-----------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR       | MODEL NUMBER    | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Power Meter                  | Anritsu   | ML2496A         | 1326001       | 06/23/2015 | 06/22/2016 |
| Power Sensor                 | Anritsu   | MA2411B         | 1315048       | 06/23/2015 | 06/22/2016 |
| Spectrum Analyzer            | KEYSIGHT  | N9010A          | MY54510568    | 04/14/2016 | 04/13/2017 |
| DC Block                     | PASTERNAK | PE8210          | RF29          | 12/12/2015 | 12/11/2016 |
| Coaxial Cable 30cm           | WOKEN     | 00100A1F1A19 5C | RF01          | 12/12/2015 | 12/11/2016 |
| Attenuator                   | WOKEN     | 218FS-10        | RF23          | 12/12/2015 | 12/11/2016 |
| Splitter                     | RF-LAMBDA | RFLT2W1G18 G    | RF35          | 12/12/2015 | 12/11/2016 |
| DC Power Supply              | Agilent   | E3640A          | MY53140006    | 05/04/2016 | 05/03/2017 |
| Temperature Chamber          | TERCHY    | MHK-120LK       | 1020582       | 06/23/2015 | 06/22/2016 |

## 8.3 Test Set-up

Power Meter:



## 8.4 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.

### Power Meter:

It is used as the auxiliary test equipment to conduct the output power measurement.

4. Record the max. Reading as observed from Spectrum or Power Meter.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 8.5 Measurement Result

| 802.11b Main |                 |           |                         |                        |                    |        |
|--------------|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| CH           | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
| 1            | 2412            | 1         | 7.85                    | 6.10                   | 1 Watt = 30.00 dBm | PASS   |
| 6            | 2437            | 1         | <b>8.08</b>             | <b>6.43</b>            | 1 Watt = 30.00 dBm | PASS   |
| 11           | 2462            | 1         | 6.89                    | 4.89                   | 1 Watt = 30.00 dBm | PASS   |
| 802.11b Main |                 |           |                         |                        |                    |        |
| CH           | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
| 1            | 2412            | 1         | 3.93                    | 2.47                   | 1 Watt = 30.00 dBm | PASS   |
| 6            | 2437            | 1         | <b>4.25</b>             | <b>2.66</b>            | 1 Watt = 30.00 dBm | PASS   |
| 11           | 2462            | 1         | 2.91                    | 1.95                   | 1 Watt = 30.00 dBm | PASS   |

| 802.11b Aux1 |                 |           |                         |                        |                    |        |
|--------------|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| CH           | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
| 1            | 2412            | 1         | 7.77                    | 5.98                   | 1 Watt = 30.00 dBm | PASS   |
| 6            | 2437            | 1         | 7.92                    | 6.19                   | 1 Watt = 30.00 dBm | PASS   |
| 11           | 2462            | 1         | 6.76                    | 4.74                   | 1 Watt = 30.00 dBm | PASS   |
| 802.11b Aux1 |                 |           |                         |                        |                    |        |
| CH           | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
| 1            | 2412            | 1         | 3.81                    | 2.40                   | 1 Watt = 30.00 dBm | PASS   |
| 6            | 2437            | 1         | 4.02                    | 2.52                   | 1 Watt = 30.00 dBm | PASS   |
| 11           | 2462            | 1         | 2.49                    | 1.77                   | 1 Watt = 30.00 dBm | PASS   |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

### 802.11g Main

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | 6         | 24.02                   | 252.35                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | 6         | 23.88                   | 244.34                 | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | 6         | 23.96                   | 248.89                 | 1 Watt = 30.00 dBm | PASS   |

### 802.11g Main

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | 6         | 14.19                   | 26.24                  | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | 6         | 14.55                   | 28.51                  | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | 6         | 12.44                   | 17.54                  | 1 Watt = 30.00 dBm | PASS   |

### 802.11g Aux1

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | 6         | 24.08                   | 255.86                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | 6         | <b>24.09</b>            | <b>256.45</b>          | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | 6         | 22.67                   | 184.93                 | 1 Watt = 30.00 dBm | PASS   |

### 802.11g Aux1

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | 6         | 14.25                   | 26.61                  | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | 6         | <b>14.87</b>            | <b>30.69</b>           | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | 6         | 12.47                   | 17.66                  | 1 Watt = 30.00 dBm | PASS   |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

**802.11n\_HT20M Main**

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | MCS0      | 21.94                   | 156.31                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 21.85                   | 153.11                 | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | MCS0      | 21.67                   | 146.89                 | 1 Watt = 30.00 dBm | PASS   |

**802.11n\_HT20M Main**

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | MCS0      | 11.41                   | 13.84                  | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 11.86                   | 15.35                  | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | MCS0      | 11.05                   | 12.74                  | 1 Watt = 30.00 dBm | PASS   |

**802.11n\_HT20M Aux1**

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | MCS0      | 23.25                   | 211.35                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 23.28                   | 212.81                 | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | MCS0      | <b>23.47</b>            | <b>222.33</b>          | 1 Watt = 30.00 dBm | PASS   |

**802.11n\_HT20M Aux1**

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 1  | 2412            | MCS0      | 11.65                   | 14.62                  | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | <b>12.61</b>            | <b>18.24</b>           | 1 Watt = 30.00 dBm | PASS   |
| 11 | 2462            | MCS0      | 11.51                   | 14.16                  | 1 Watt = 30.00 dBm | PASS   |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_HT20M MIMO

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) |       | Total Peak Output Power (dBm) | Total Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|-------|-------------------------------|------------------------------|--------------------|--------|
|    |                 |           | CH 0                    | CH 1  |                               |                              |                    |        |
| 1  | 2412            | MCS8      | 21.84                   | 21.59 | 24.73                         | 296.97                       | 1 Watt = 29.08 dBm | PASS   |
| 6  | 2437            | MCS8      | 21.64                   | 23.11 | 25.45                         | 350.53                       | 1 Watt = 29.08 dBm | PASS   |
| 11 | 2462            | MCS8      | 21.62                   | 21.39 | 24.52                         | 282.93                       | 1 Watt = 29.08 dBm | PASS   |

## 802.11n\_HT20M MIMO

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) |       | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|-------|-------------------------|------------------------|--------------------|--------|
|    |                 |           | CH 0                    | CH 1  |                         |                        |                    |        |
| 1  | 2412            | MCS8      | 11.67                   | 12.01 | 14.85                   | 30.57                  | 1 Watt = 29.08 dBm | PASS   |
| 6  | 2437            | MCS8      | 11.55                   | 12.25 | 14.92                   | 31.08                  | 1 Watt = 29.08 dBm | PASS   |
| 11 | 2462            | MCS8      | 10.53                   | 11.23 | 13.90                   | 24.57                  | 1 Watt = 29.08 dBm | PASS   |

## 802.11n\_HT40M Main

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 3  | 2422            | MCS0      | 21.43                   | 139.00                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 21.54                   | 142.56                 | 1 Watt = 30.00 dBm | PASS   |
| 9  | 2452            | MCS0      | 21.67                   | 146.89                 | 1 Watt = 30.00 dBm | PASS   |

## 802.11n\_HT40M Main

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 3  | 2422            | MCS0      | 9.68                    | 9.29                   | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 11.7                    | 14.79                  | 1 Watt = 30.00 dBm | PASS   |
| 9  | 2452            | MCS0      | 9.57                    | 9.06                   | 1 Watt = 30.00 dBm | PASS   |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

**802.11n\_HT40M Aux1**

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) | Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 3  | 2422            | MCS0      | 22.33                   | 171.00                 | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | 22.34                   | 171.40                 | 1 Watt = 30.00 dBm | PASS   |
| 9  | 2452            | MCS0      | <b>22.63</b>            | <b>183.23</b>          | 1 Watt = 30.00 dBm | PASS   |

**802.11n\_HT40M Aux1**

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|------------------------|--------------------|--------|
| 3  | 2422            | MCS0      | 10.72                   | 11.80                  | 1 Watt = 30.00 dBm | PASS   |
| 6  | 2437            | MCS0      | <b>12.27</b>            | <b>16.87</b>           | 1 Watt = 30.00 dBm | PASS   |
| 9  | 2452            | MCS0      | 11.45                   | 13.96                  | 1 Watt = 30.00 dBm | PASS   |

**802.11n\_HT40M MIMO**

| CH | Frequency (MHz) | Data Rate | Peak Output Power (dBm) |       | Total Peak Output Power (dBm) | Total Peak Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|-------|-------------------------------|------------------------------|--------------------|--------|
|    |                 |           | CH 0                    | CH 1  |                               |                              |                    |        |
| 3  | 2422            | MCS8      | 19.98                   | 20.61 | 23.32                         | 214.62                       | 1 Watt = 29.08 dBm | PASS   |
| 6  | 2437            | MCS8      | 21.47                   | 22.80 | <b>25.20</b>                  | 330.83                       | 1 Watt = 29.08 dBm | PASS   |
| 9  | 2452            | MCS8      | 19.58                   | 22.87 | 24.54                         | 284.42                       | 1 Watt = 29.08 dBm | PASS   |

**802.11n\_HT40M MIMO**

| CH | Frequency (MHz) | Data Rate | Avg. Output Power (dBm) |       | Avg. Output Power (dBm) | Avg. Output Power (mW) | Limit              | RESULT |
|----|-----------------|-----------|-------------------------|-------|-------------------------|------------------------|--------------------|--------|
|    |                 |           | CH 0                    | CH 1  |                         |                        |                    |        |
| 3  | 2422            | MCS8      | 9.61                    | 10.86 | 13.29                   | 21.33                  | 1 Watt = 29.08 dBm | PASS   |
| 6  | 2437            | MCS8      | 11.31                   | 12.22 | <b>14.80</b>            | 30.19                  | 1 Watt = 29.08 dBm | PASS   |
| 9  | 2452            | MCS8      | 9.42                    | 11.31 | 13.48                   | 22.27                  | 1 Watt = 29.08 dBm | PASS   |

**\* Note: The duty cycle factor is compensated to obtain the maximum value of measurement in average.**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 9 6DB BANDWIDTH MEASUREMENT

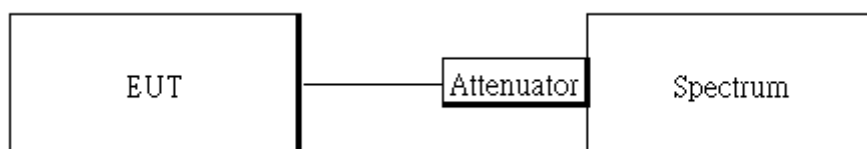
### 9.1 Standard Applicable

The minimum 6 dB bandwidth shall be at least 500 kHz.

### 9.2 Measurement Equipment Used

| Conducted Emission Test Site |           |              |               |            |            |
|------------------------------|-----------|--------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR       | MODEL NUMBER | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer            | KEYSIGHT  | N9010A       | MY54510568    | 04/14/2016 | 04/13/2017 |
| DC Block                     | PASTERNAK | PE8210       | RF29          | 12/12/2015 | 12/11/2016 |
| Attenuator                   | WOKEN     | 218FS-10     | RF23          | 12/12/2015 | 12/11/2016 |

### 9.3 Test Set-up



### 9.4 Measurement Procedure

- Place the EUT on the table and set it in transmitting mode.
- The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- For 6dB Bandwidth:  
Set the spectrum analyzer as RBW = 100 kHz, VBW = 3\*RBW, Span = 30M/50MHz, Detector=peak, Sweep=auto.
- Mark the peak frequency and -6dB (upper and lower) frequency.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 9.5 Measurement Result

### 6dB Bandwidth

#### 802.11b Main

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2412            | <b>8108</b>         | > 500       | PASS   |
| 2437            | 8105                | > 500       | PASS   |
| 2462            | 8104                | > 500       | PASS   |

#### 802.11g Main

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2412            | 15110               | > 500       | PASS   |
| 2437            | <b>15130</b>        | > 500       | PASS   |
| 2462            | <b>15130</b>        | > 500       | PASS   |

#### 802.11\_n\_HT20 Main

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2412            | 15090               | > 500       | PASS   |
| 2437            | <b>15120</b>        | > 500       | PASS   |
| 2462            | <b>15120</b>        | > 500       | PASS   |

#### 802.11\_n\_HT20 Aux1

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2412            | 15710               | > 500       | PASS   |
| 2437            | <b>16290</b>        | > 500       | PASS   |
| 2462            | 16090               | > 500       | PASS   |

#### 802.11\_n\_HT40 Main

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2422            | 35140               | > 500       | PASS   |
| 2437            | 35150               | > 500       | PASS   |
| 2452            | <b>35160</b>        | > 500       | PASS   |

#### 802.11\_n\_HT40 Aux1

| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|---------------------|-------------|--------|
| 2422            | 35140               | > 500       | PASS   |
| 2437            | <b>35740</b>        | > 500       | PASS   |
| 2452            | 35490               | > 500       | PASS   |

*\*Refer to next page for plots*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

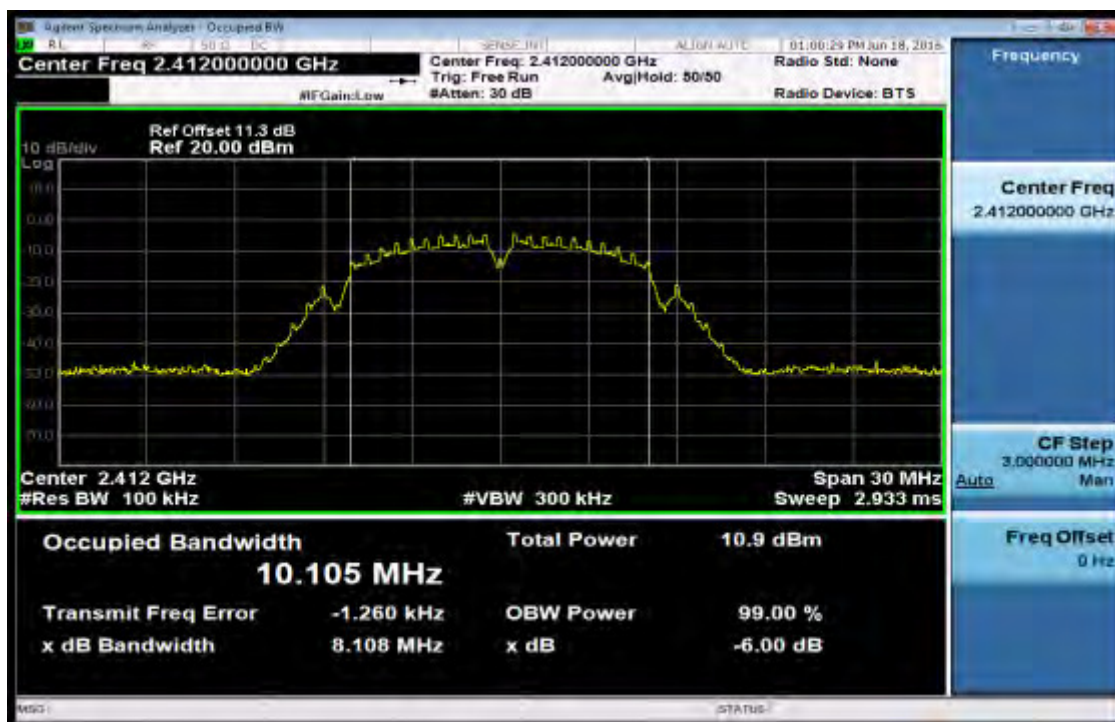
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

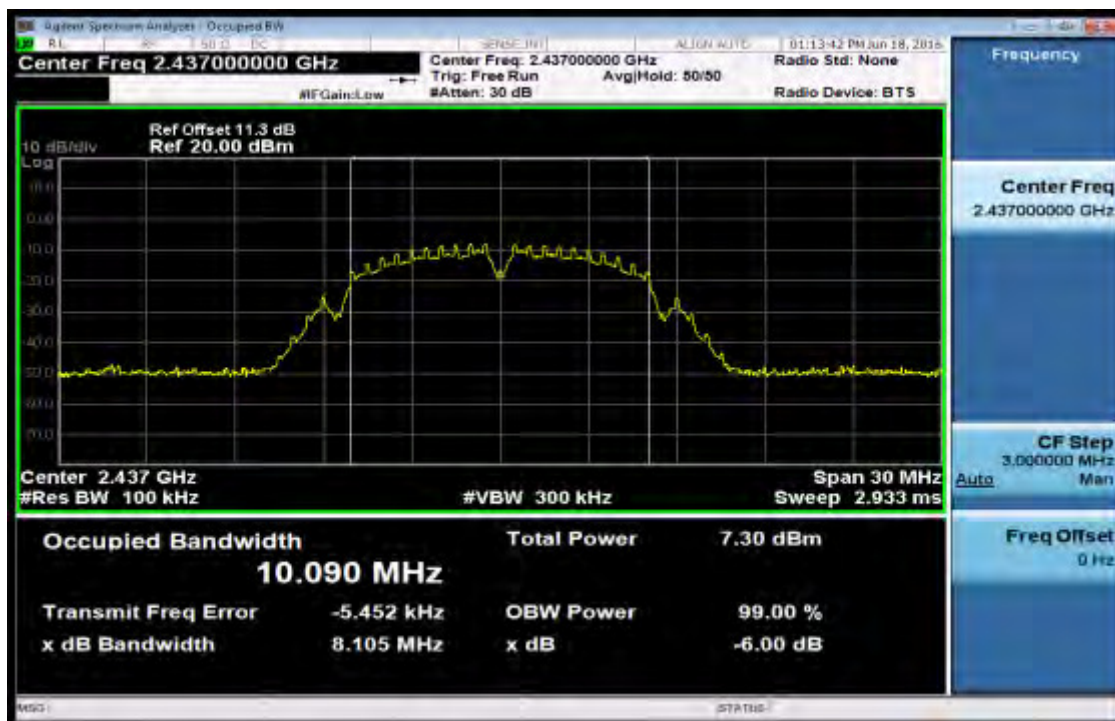
Member of SGS Group

## 802.11b (Main)

### 6dB Band Width Test Data CH-Low



### 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

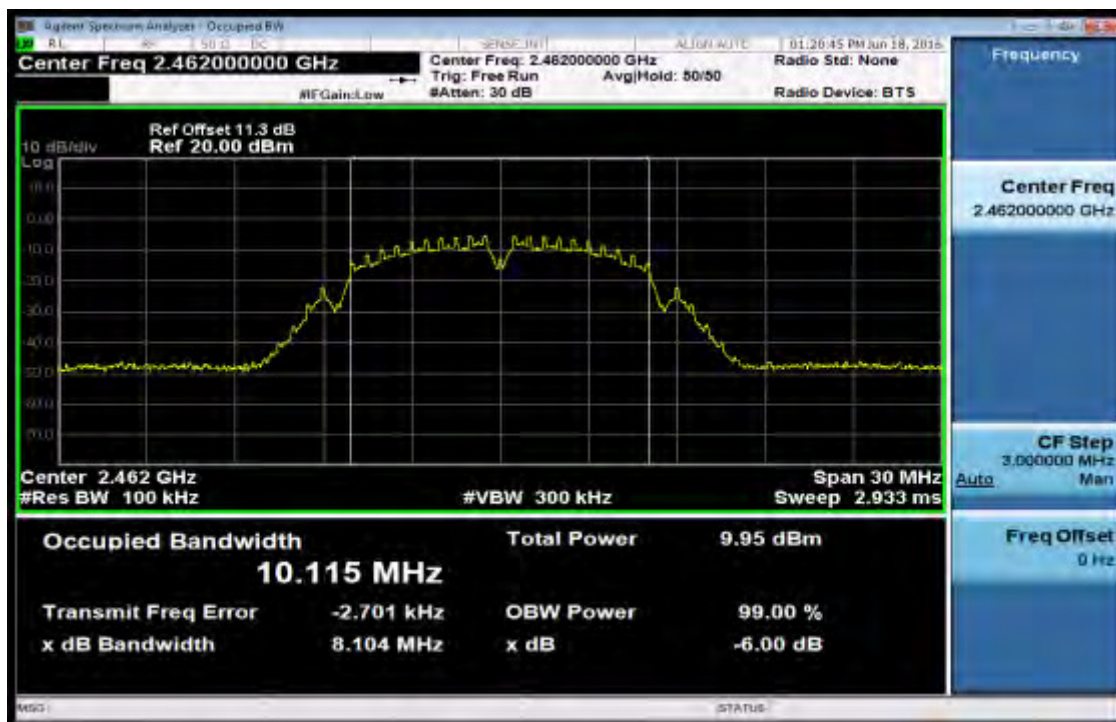
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

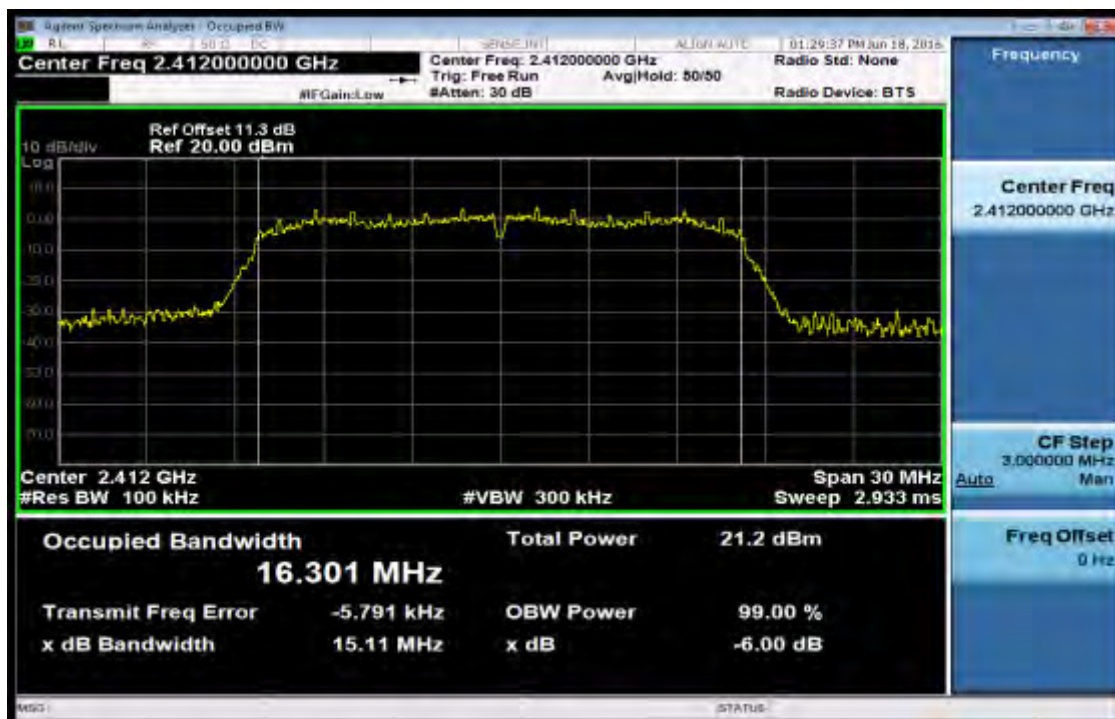
t (886-2) 2299-3279

f (886-2) 2298-0488

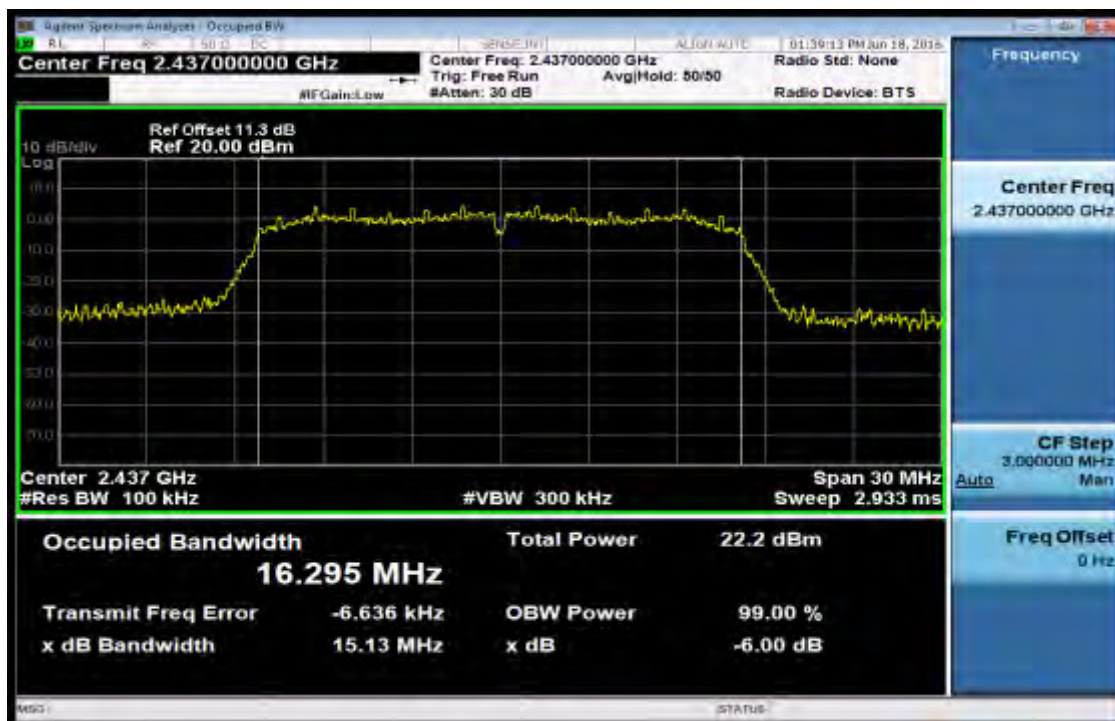
[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11g (Main) 6dB Band Width Test Data CH-Low



## 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

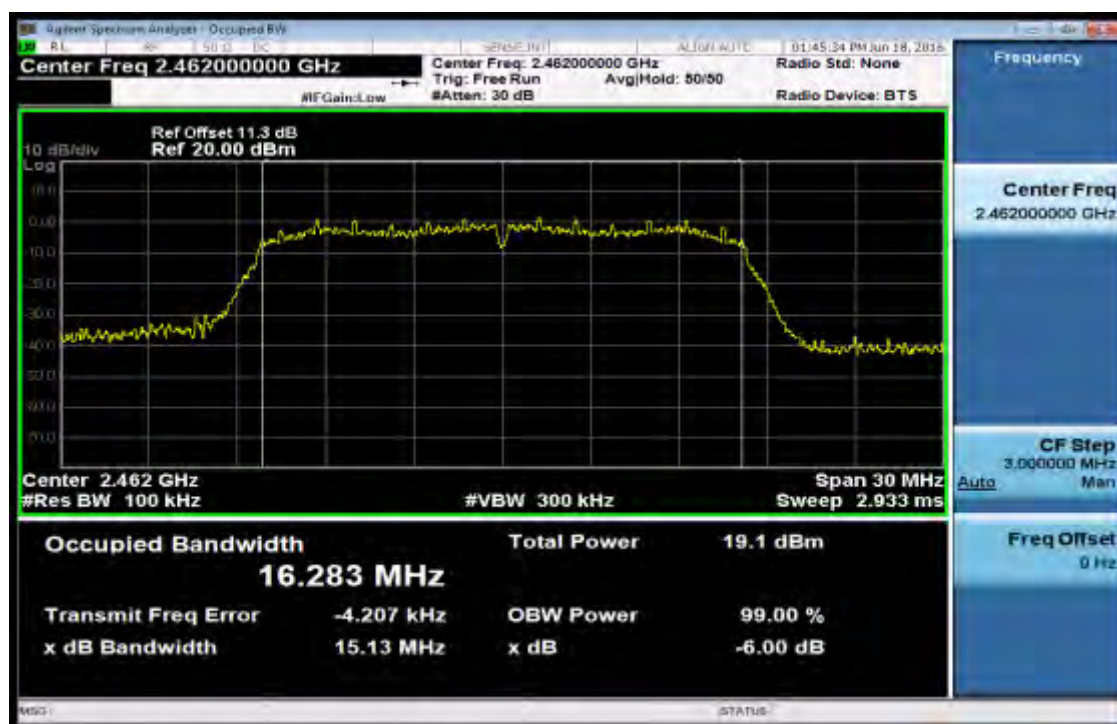
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

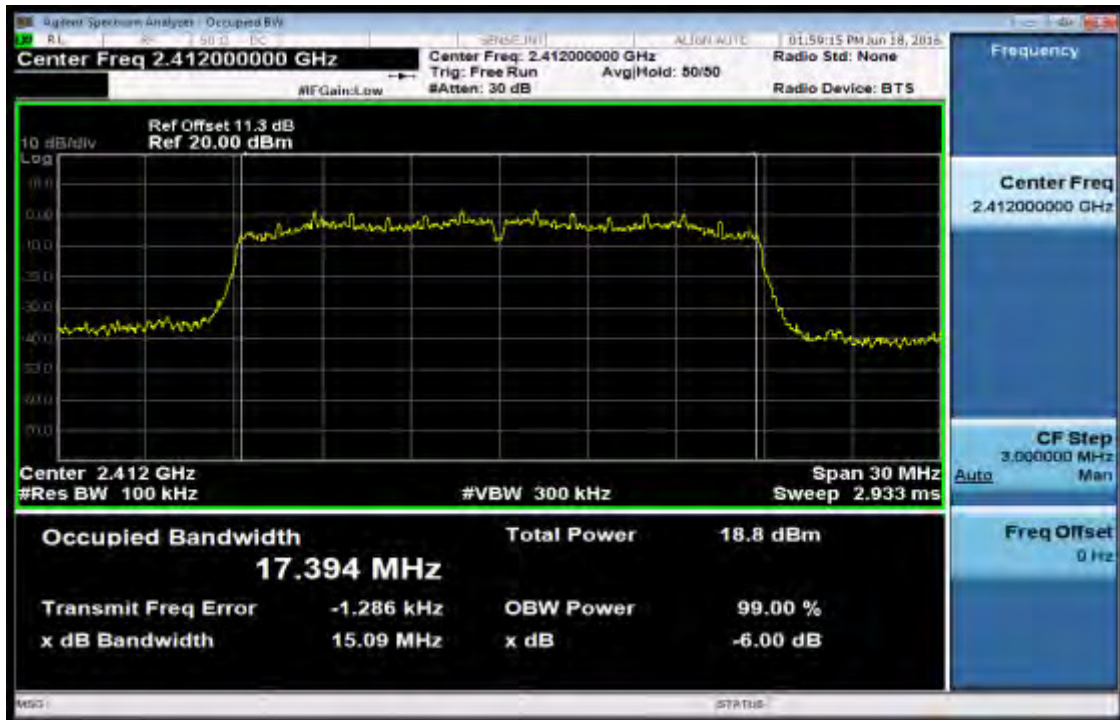
t (886-2) 2299-3279

f (886-2) 2298-0488

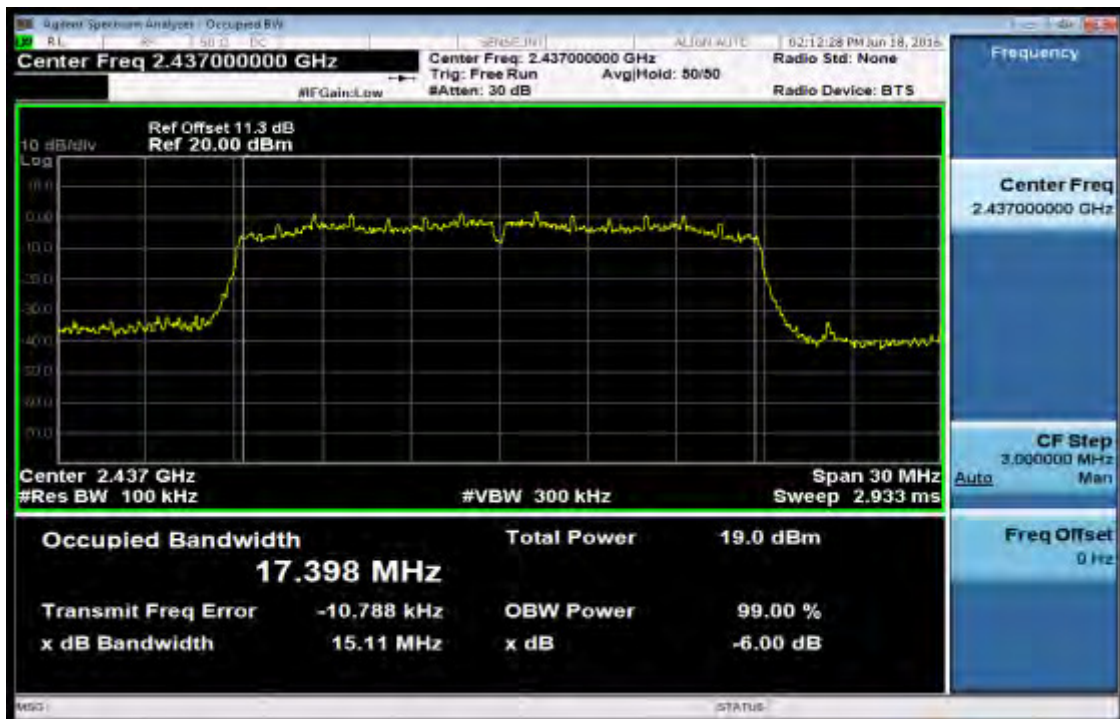
[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_20M (Main) 6dB Band Width Test Data CH-Low



## 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

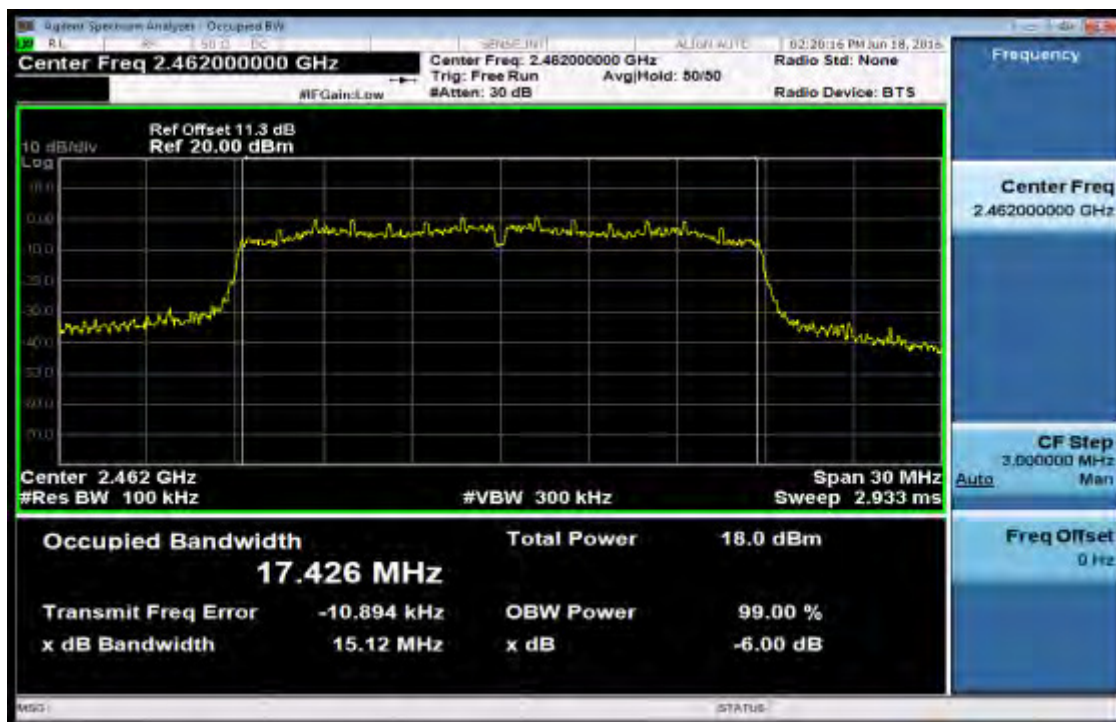
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

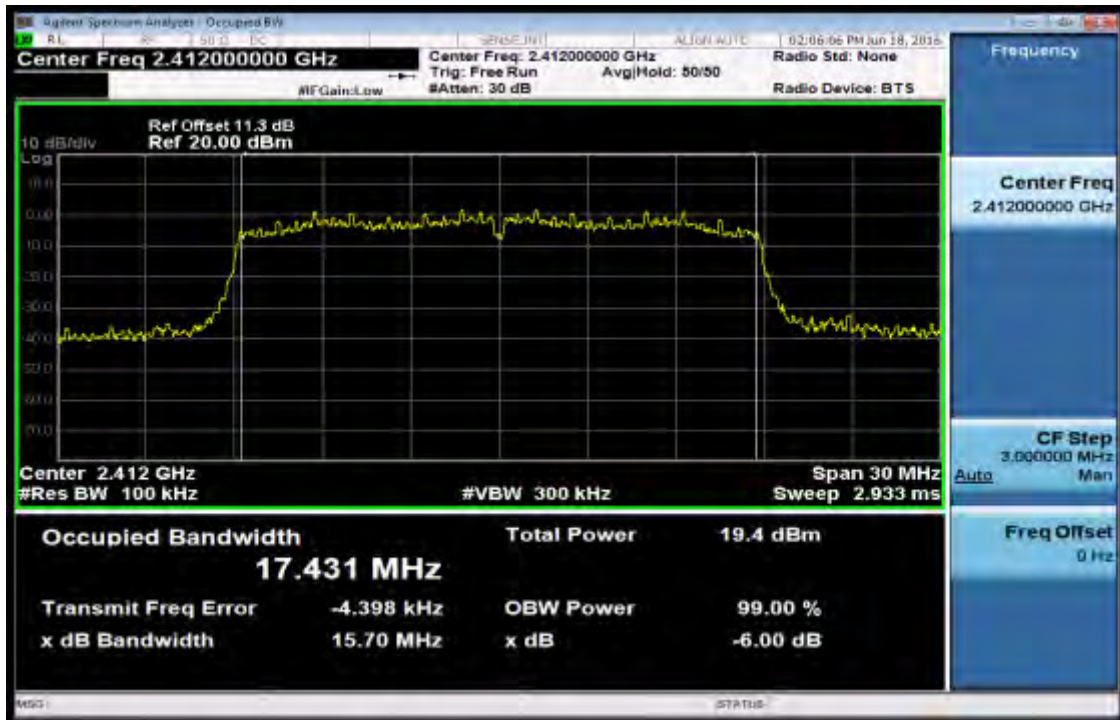
t (886-2) 2299-3279

f (886-2) 2298-0488

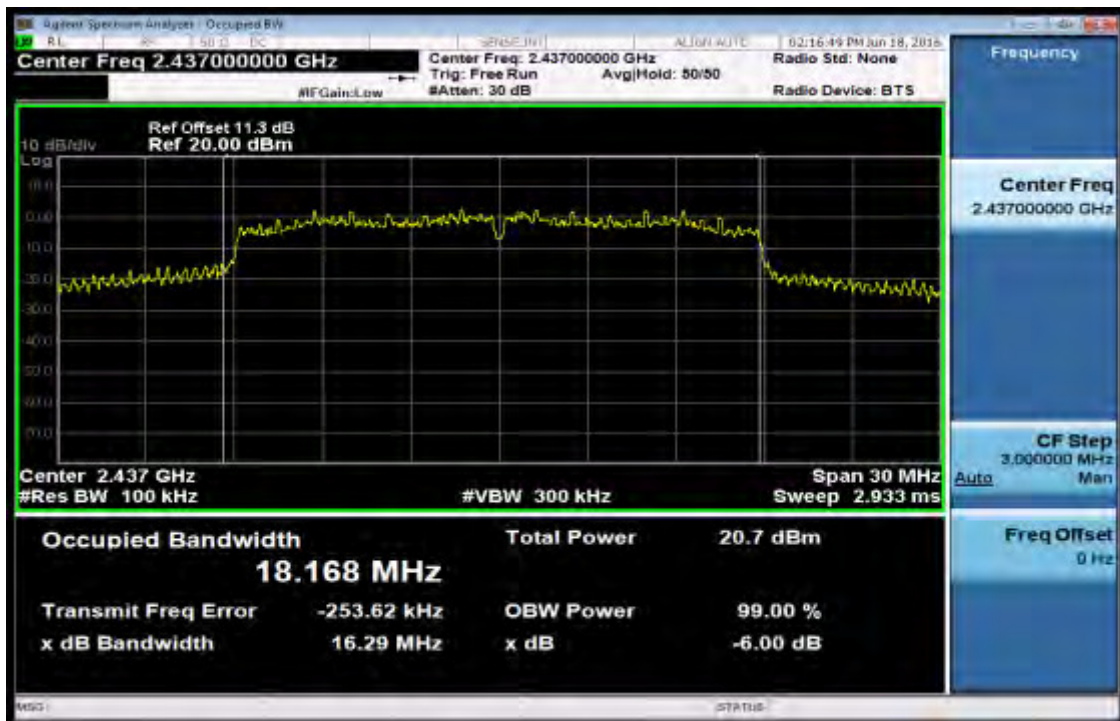
www.tw.sgs.com

Member of SGS Group

## 802.11n\_20M (AUX) 6dB Band Width Test Data CH-Low



## 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

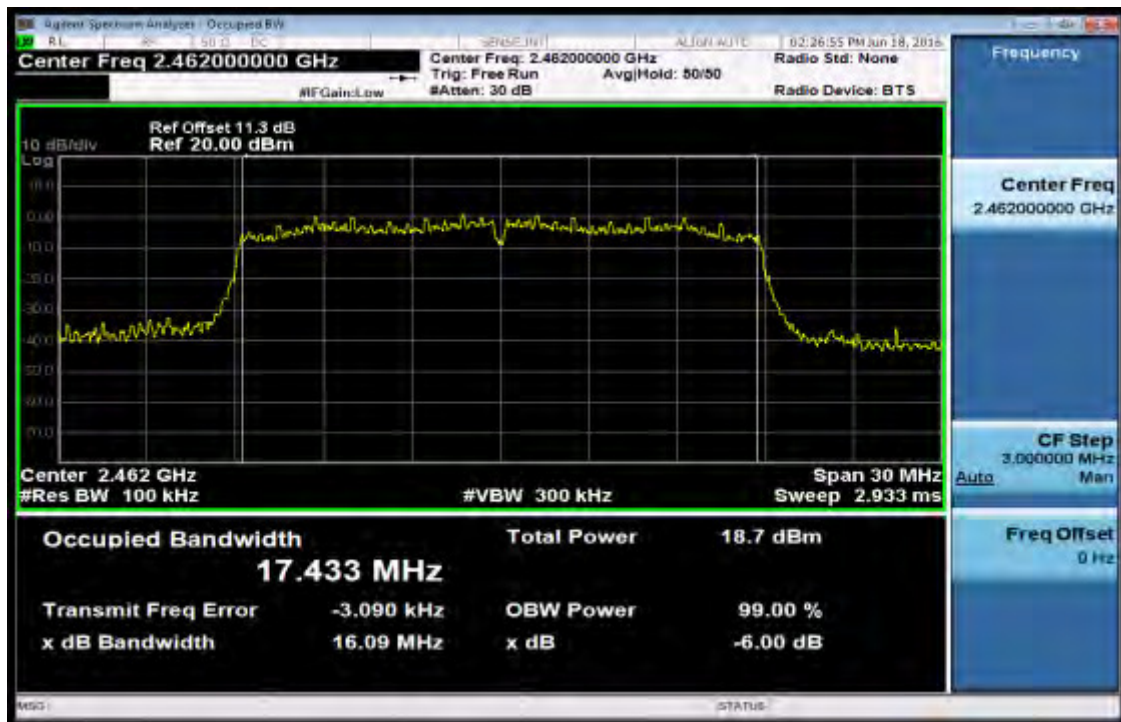
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

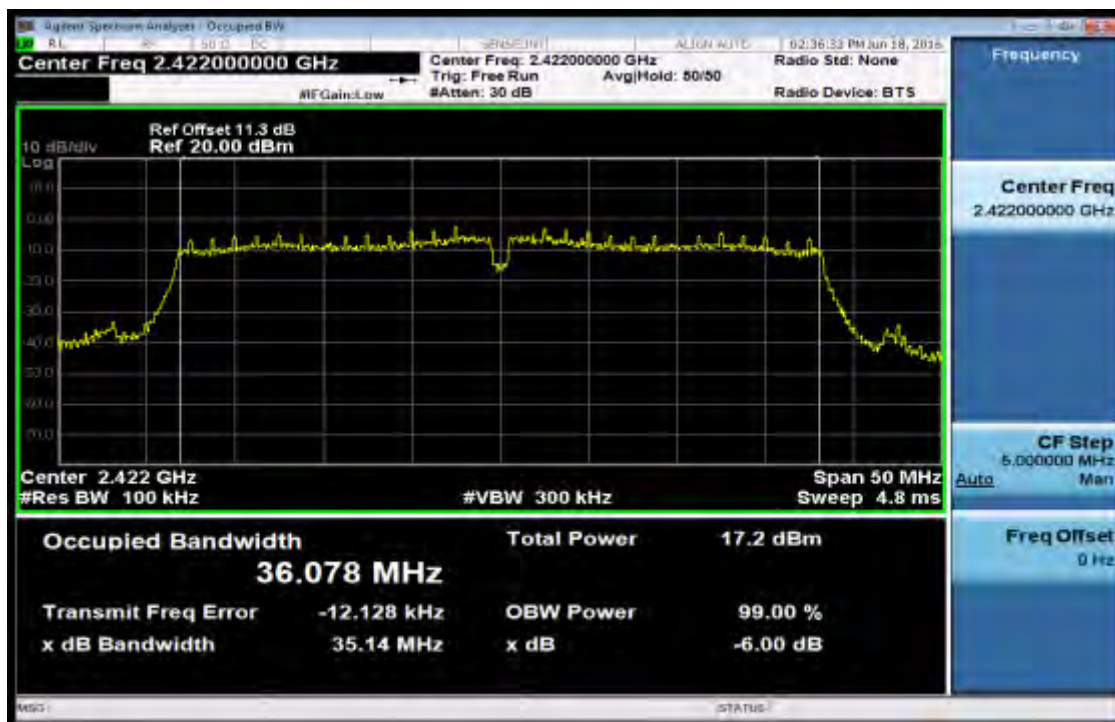
f (886-2) 2298-0488

www.tw.sgs.com

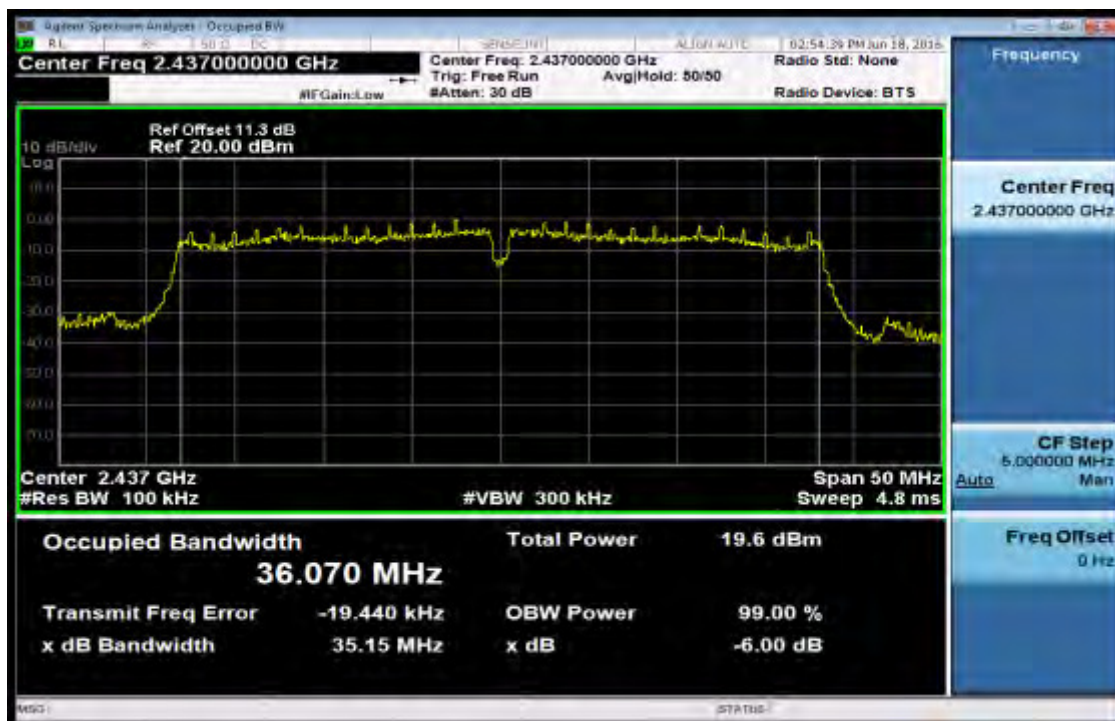
Member of SGS Group

## 802.11n\_40M (Main)

### 6dB Band Width Test Data CH-Low



### 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

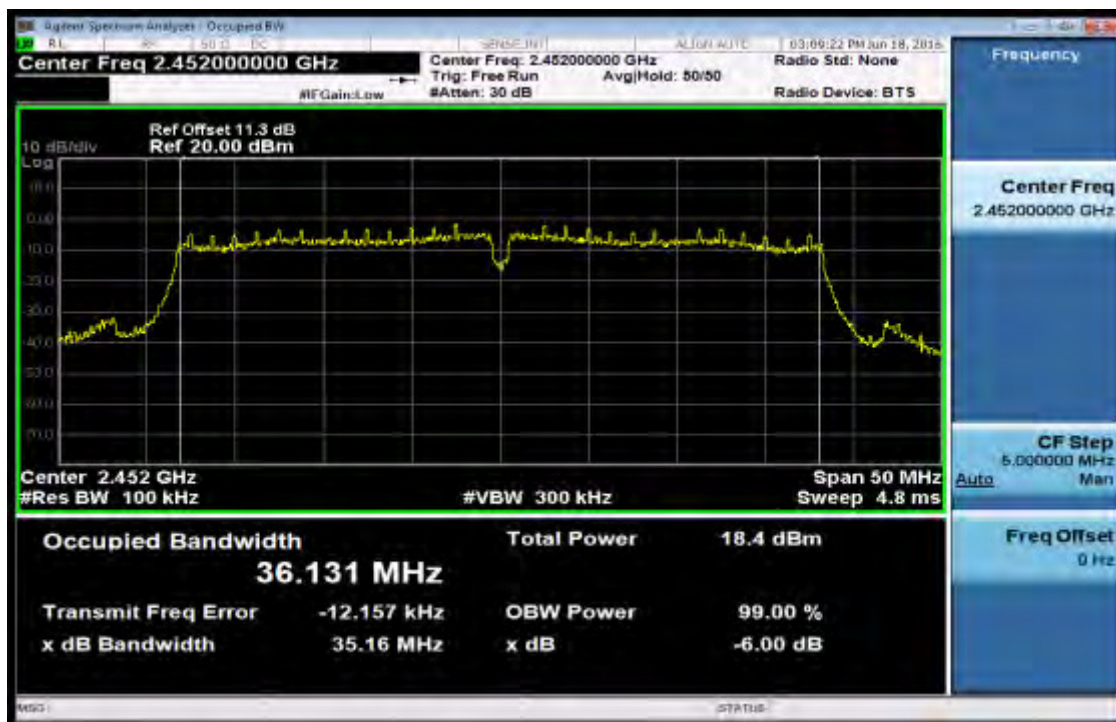
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

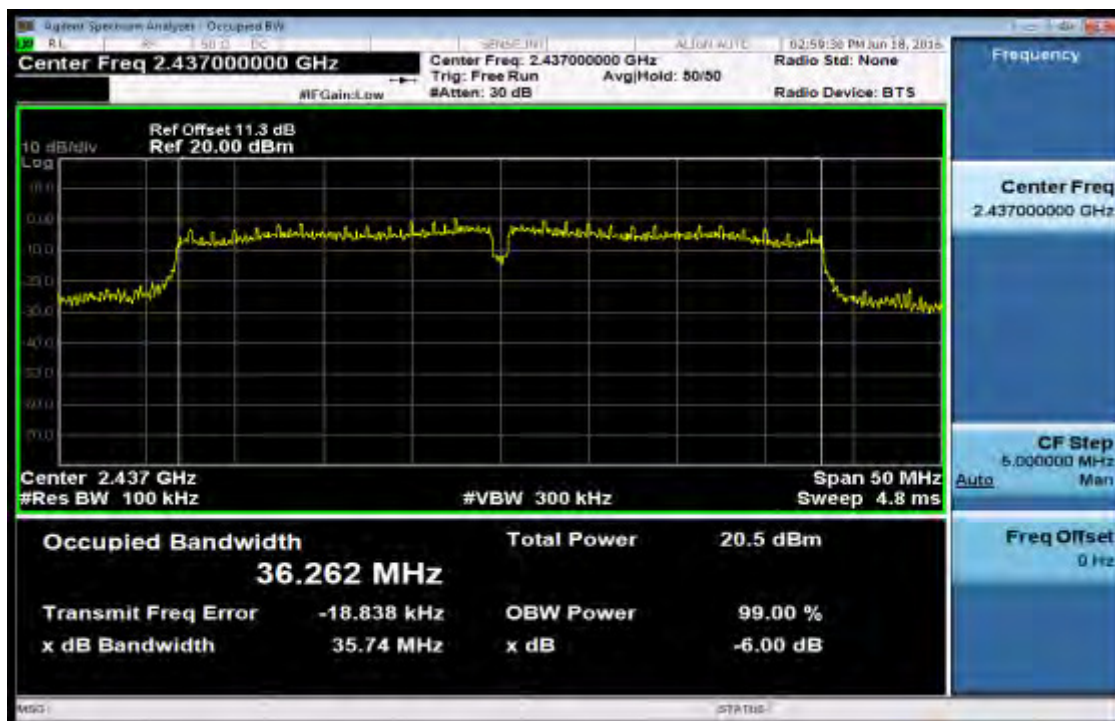
www.tw.sgs.com

Member of SGS Group

## 802.11n\_40M (AUX) 6dB Band Width Test Data CH-Low



## 6dB Band Width Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

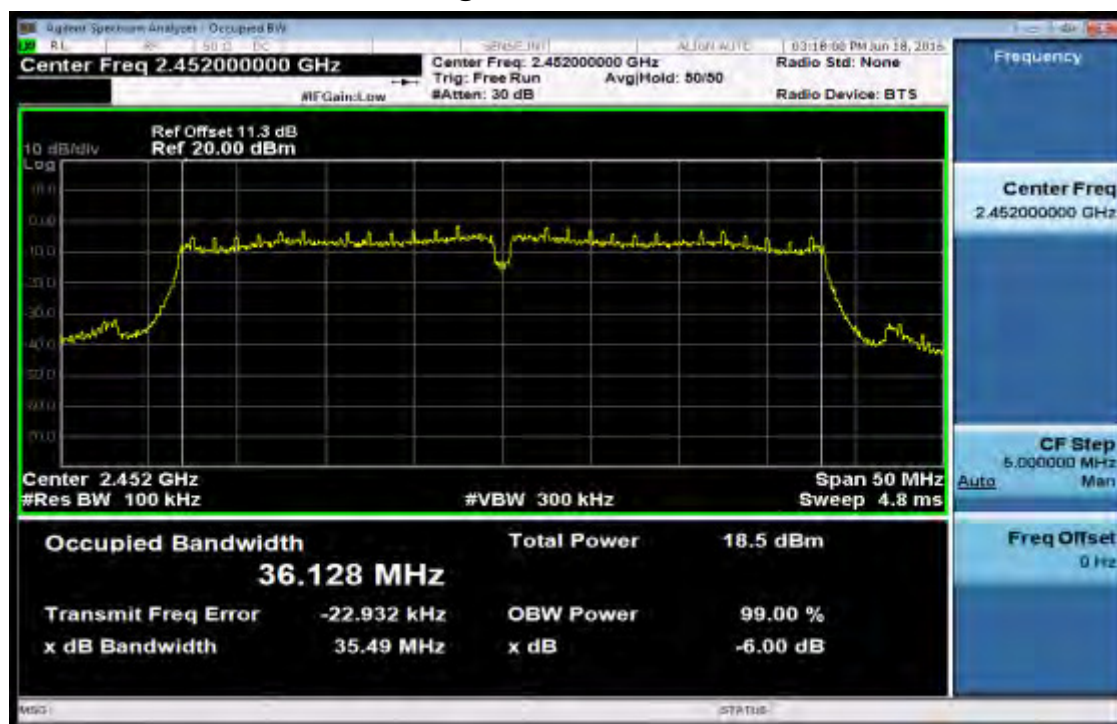
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 6dB Band Width Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## 10 CONDUCTED BAND EDGES AND SPURIOUS EMISSION MEASUREMENT

### 10.1 Standard Applicable

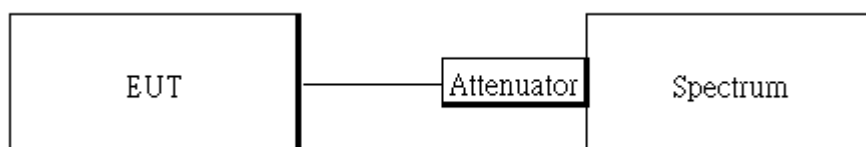
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

### 10.2 Measurement Equipment Used

| Conducted Emission Test Site |           |              |               |            |            |
|------------------------------|-----------|--------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR       | MODEL NUMBER | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer            | KEYSIGHT  | N9010A       | MY54510568    | 04/14/2016 | 04/13/2017 |
| DC Block                     | PASTERNAK | PE8210       | RF29          | 12/12/2015 | 12/11/2016 |
| Attenuator                   | WOKEN     | 218FS-10     | RF23          | 12/12/2015 | 12/11/2016 |

### 10.3 Test SET-UP



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 10.4 Measurement Procedure

### Conducted Band Edge:

1. To connect Antenna Port of EUT to Spectrum.
2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
4. Set start to edge frequency, and stop frequency of spectrum analyzer so as to encompass the spectrum to be examined.
5. Set the spectrum analyzer as RBW=100 kHz, VBW=300 kHz, Detector = Peak, Sweep = auto
6. Mark the highest reading of the emission as the reference level measurement.
7. Set DL as the limit = reading on marker 1 – 20dBm
8. Marker on frequency, 2.3999GHz and 2.4836GHz, and examine shall 100 kHz immediately outside the authorized (2400~2483.5) be attenuated by 20dB at least relative to the maximum emission of power.
9. Repeat above procedures until all default test channel (low, middle, and high) was complete.

### Conducted Spurious Emission:

1. To connect Antenna Port of EUT to Spectrum
2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
3. Set RBW = 100 kHz & VBW= 300 kHz, Detector =Peak, Sweep = Auto.
4. Allow trace to fully stabilize.
5. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Repeat above procedures until all default test channel measured were complete.

## 10.5 Measurement Result

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

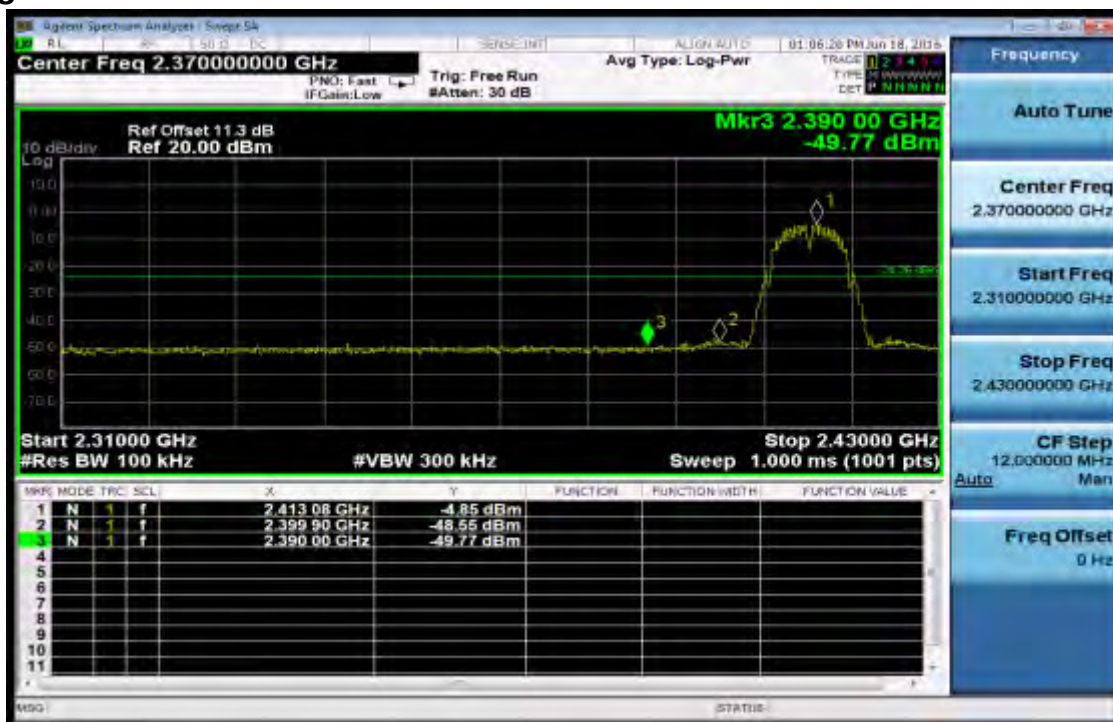
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11b

### Band Edges Test Data CH-Low



### Band Edges Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

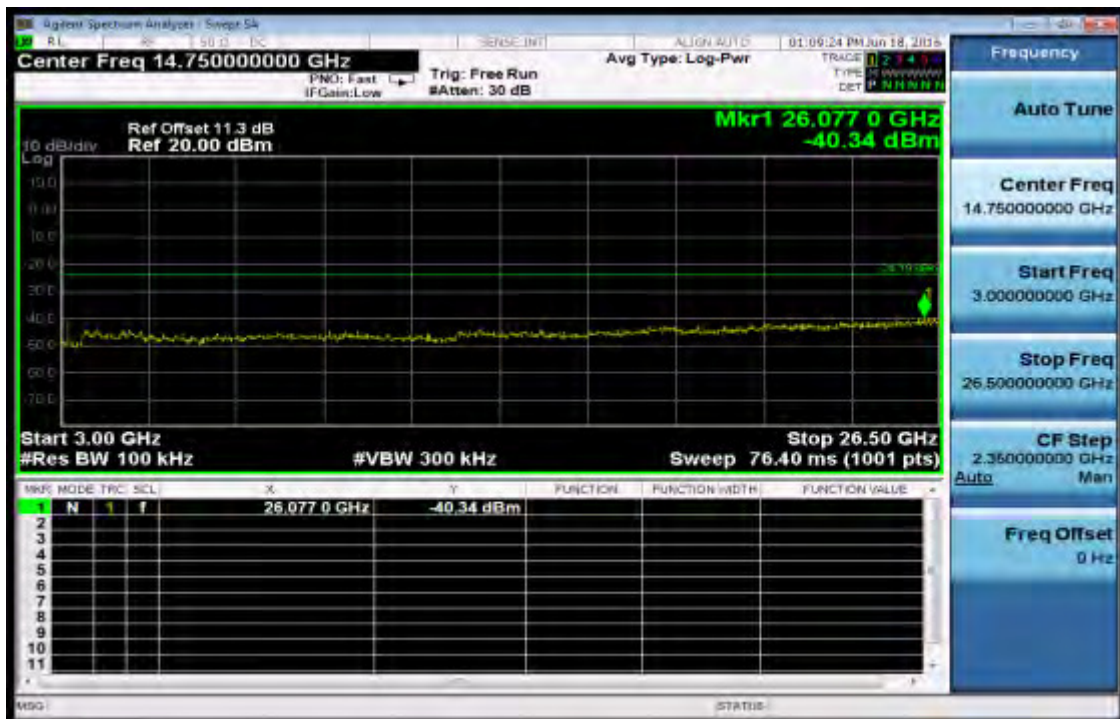
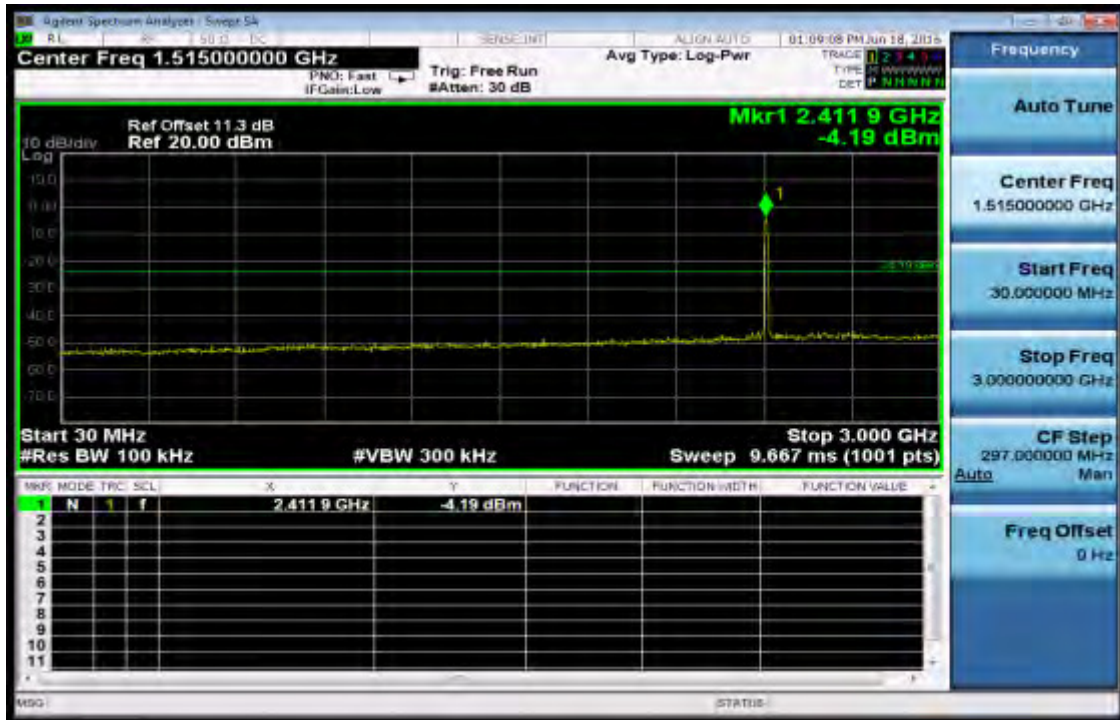
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

802.11b

Spurious Emission Test Data CH-Low



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

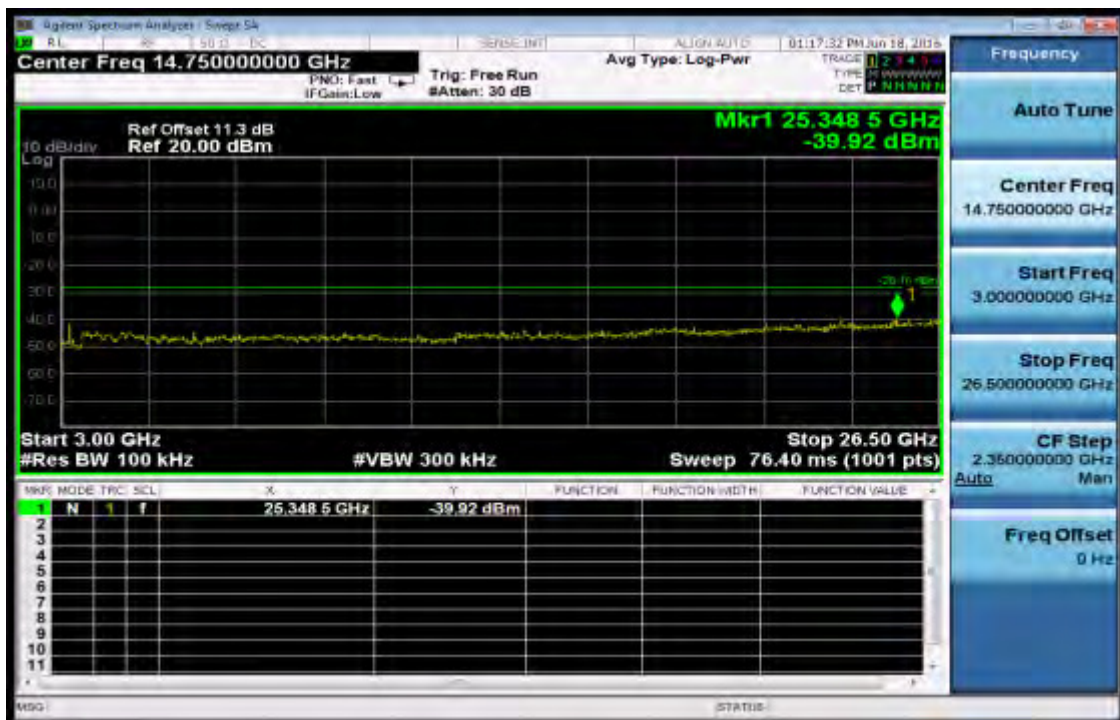
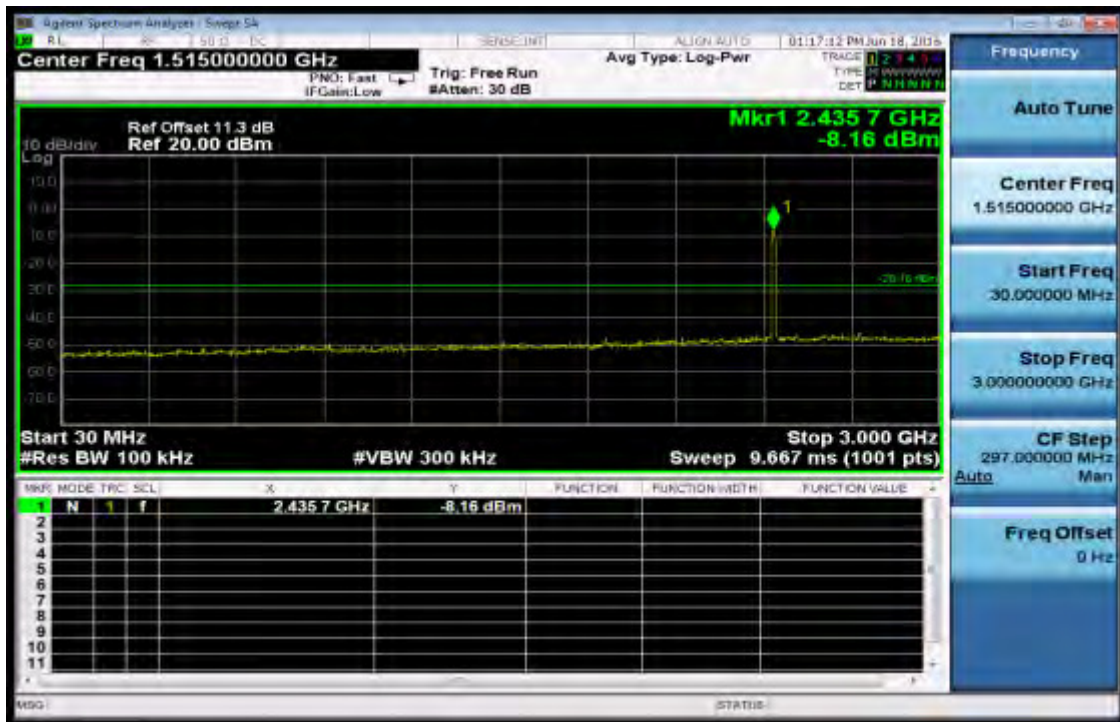
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## Spurious Emission Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

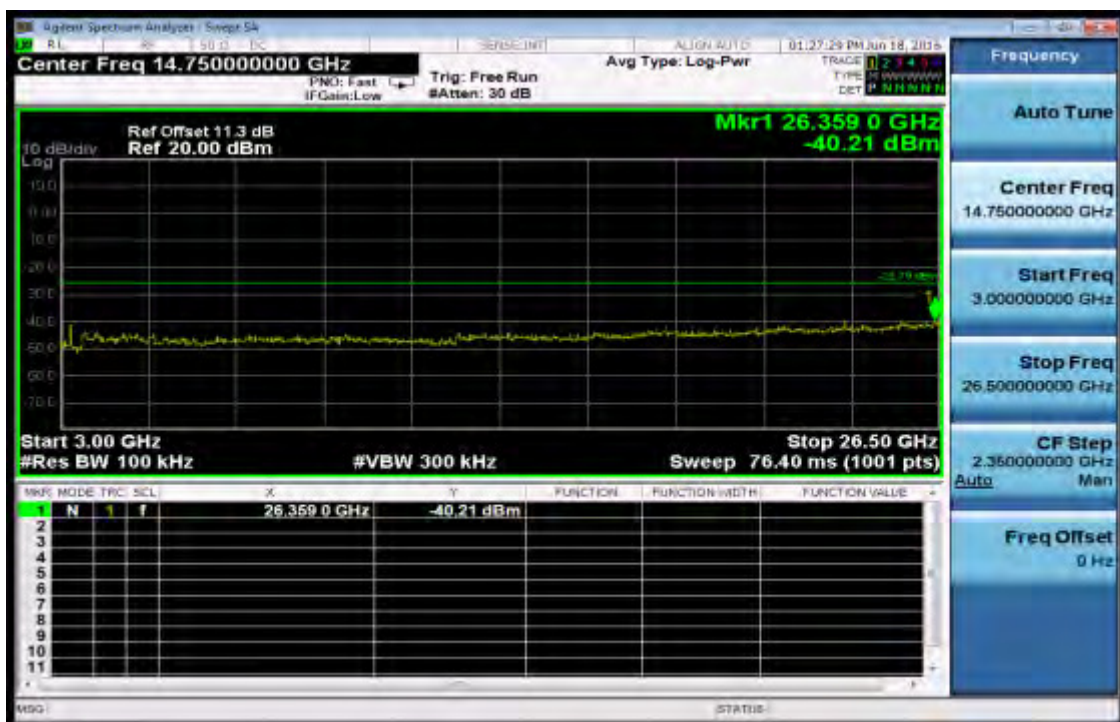
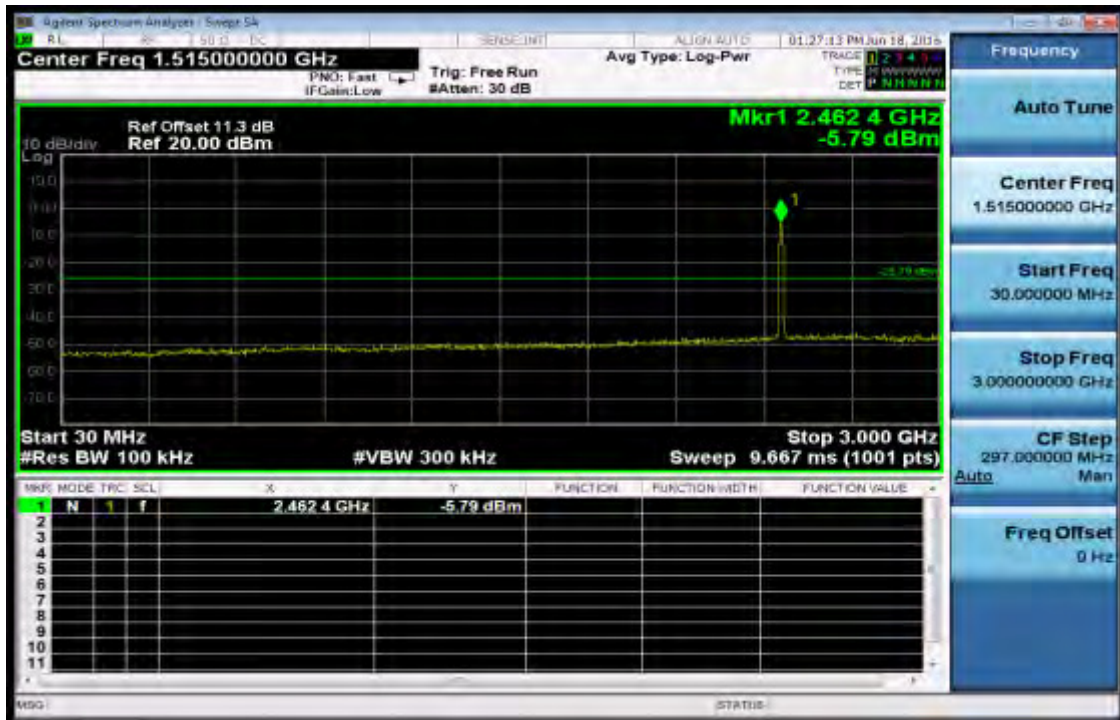
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

802.11g

## Band Edges Test Data CH-Low



## Band Edges Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

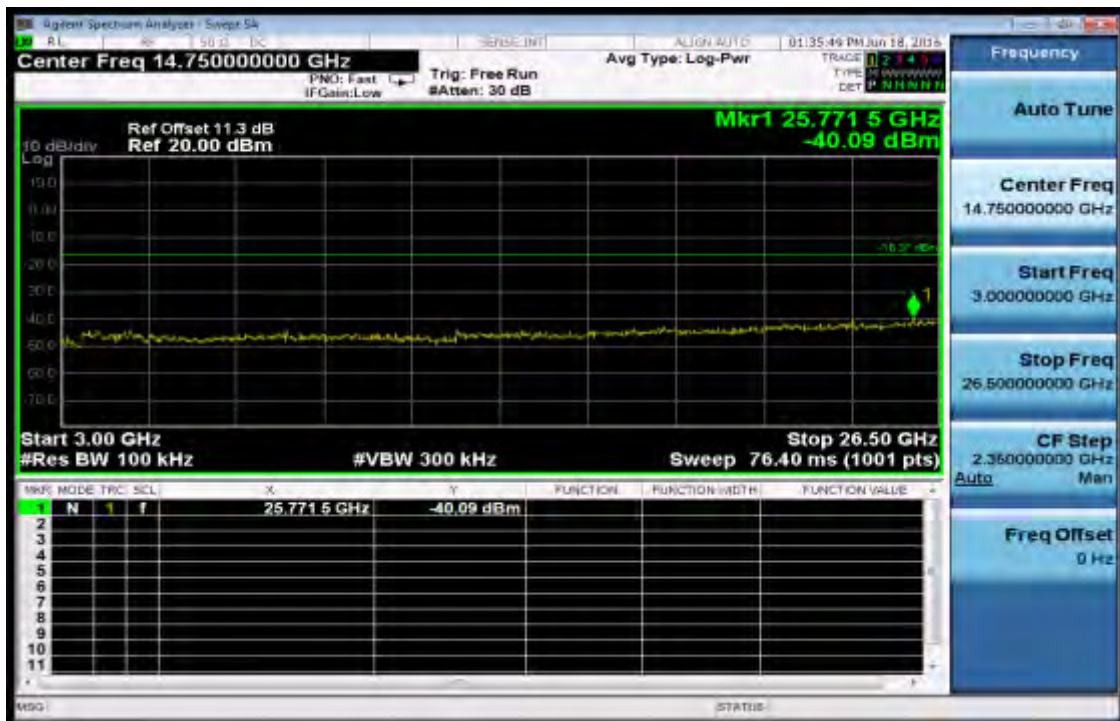
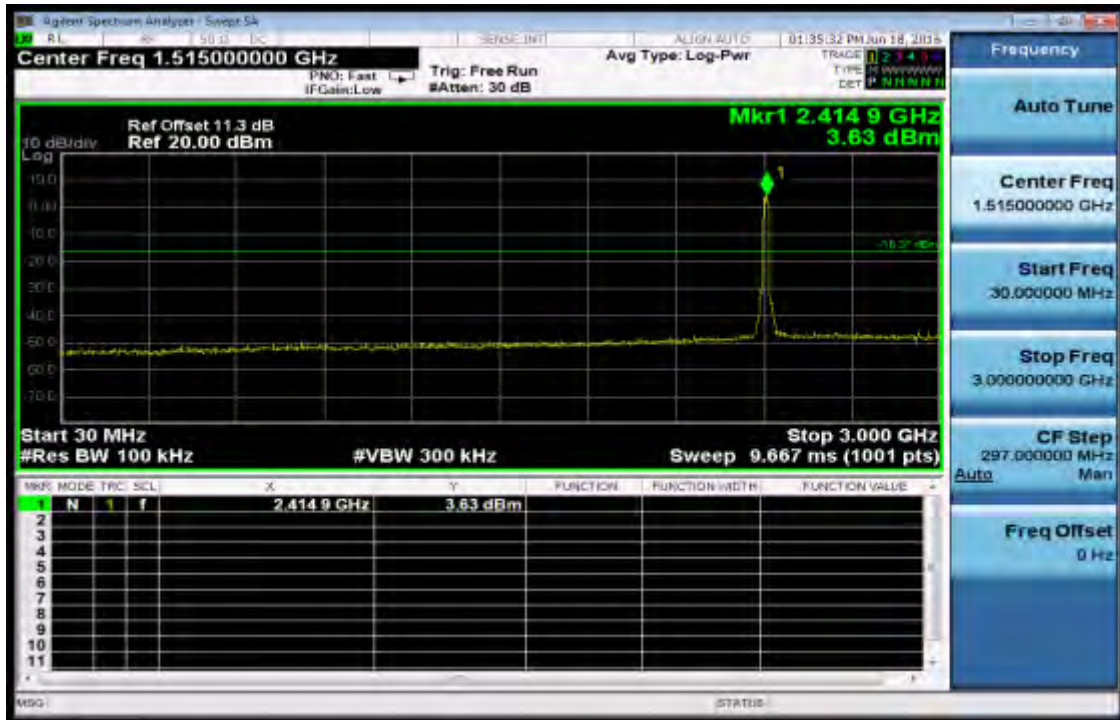
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

802.11g

## Spurious Emission Test Data CH-Low



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

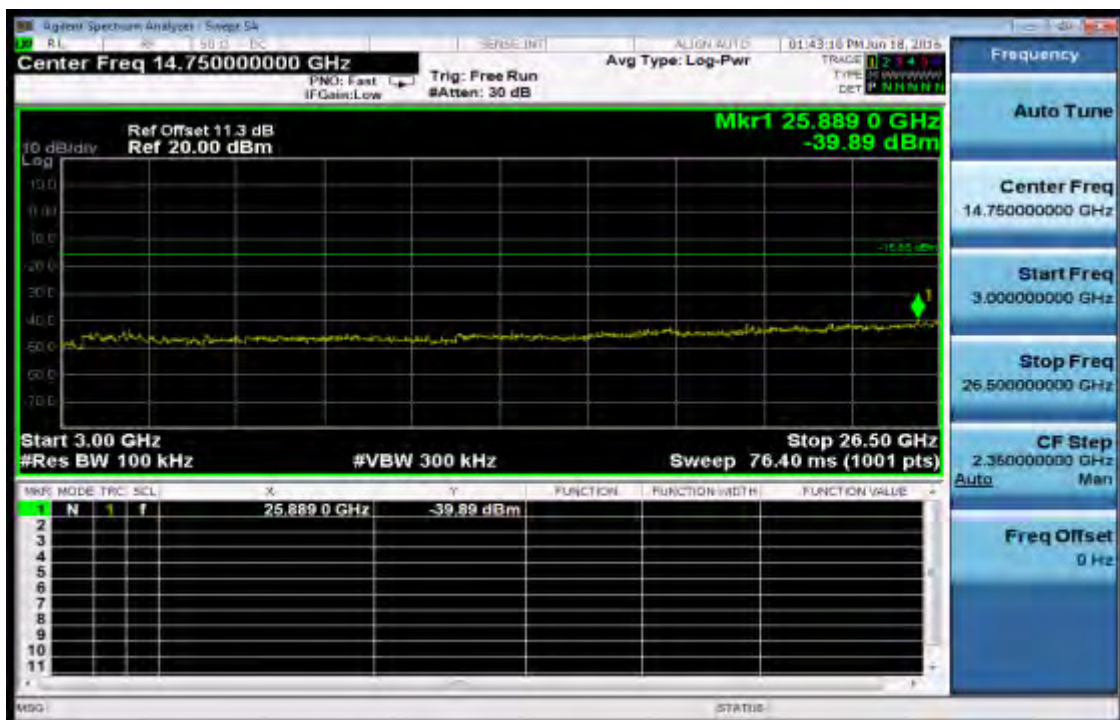
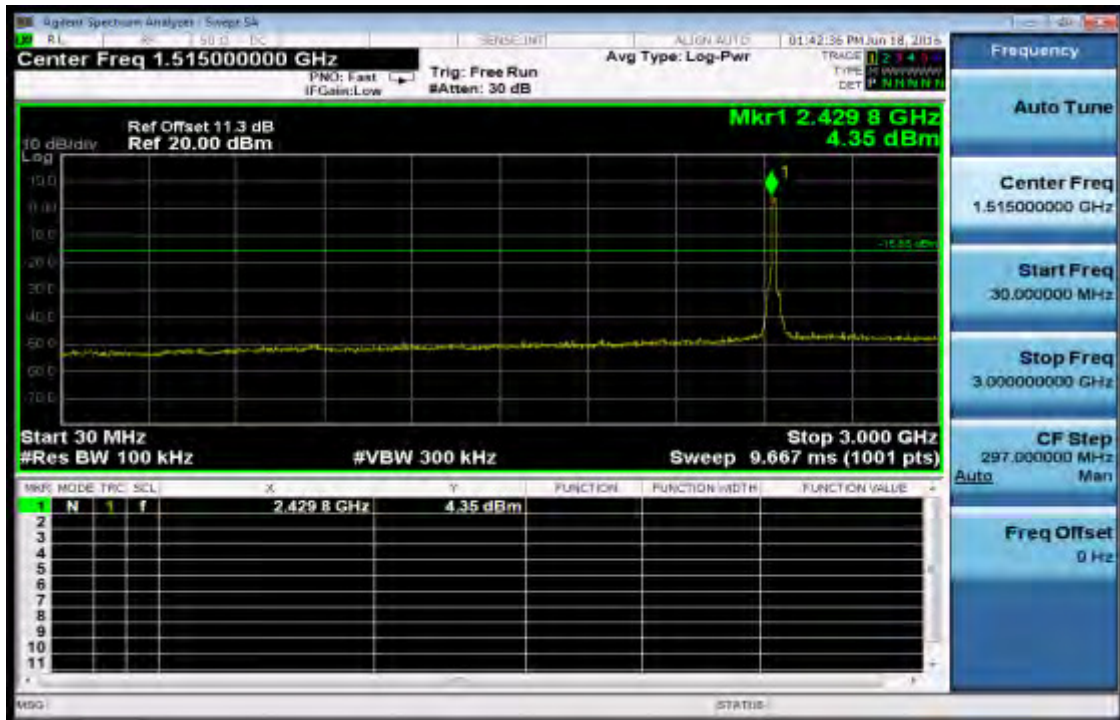
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

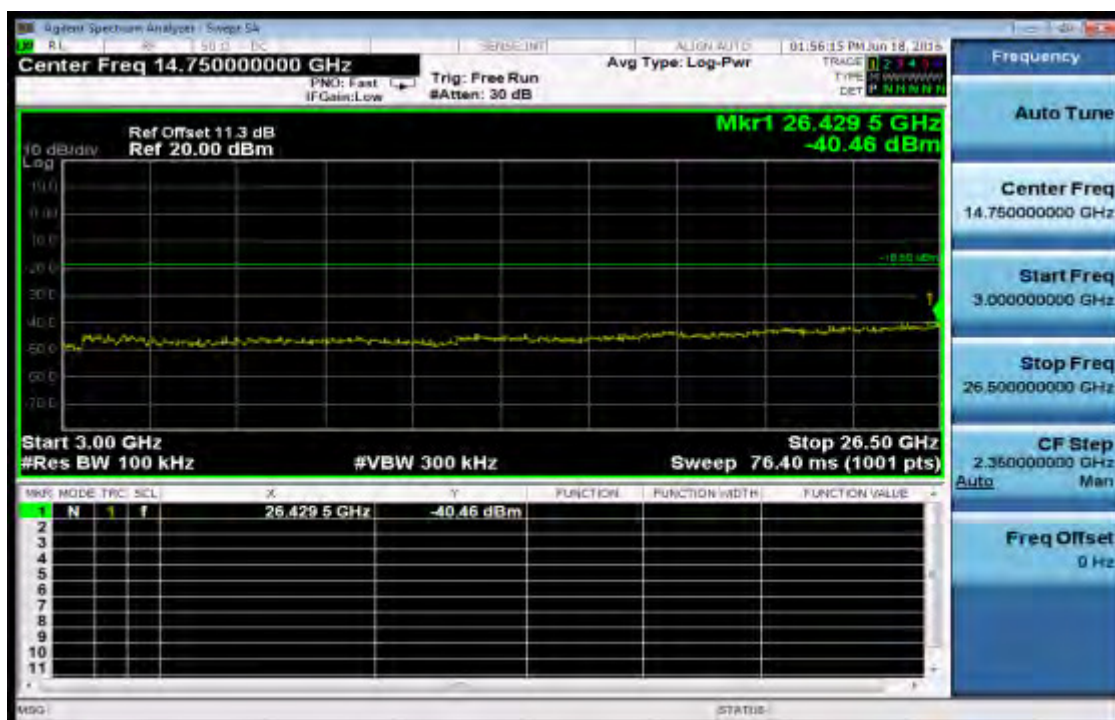
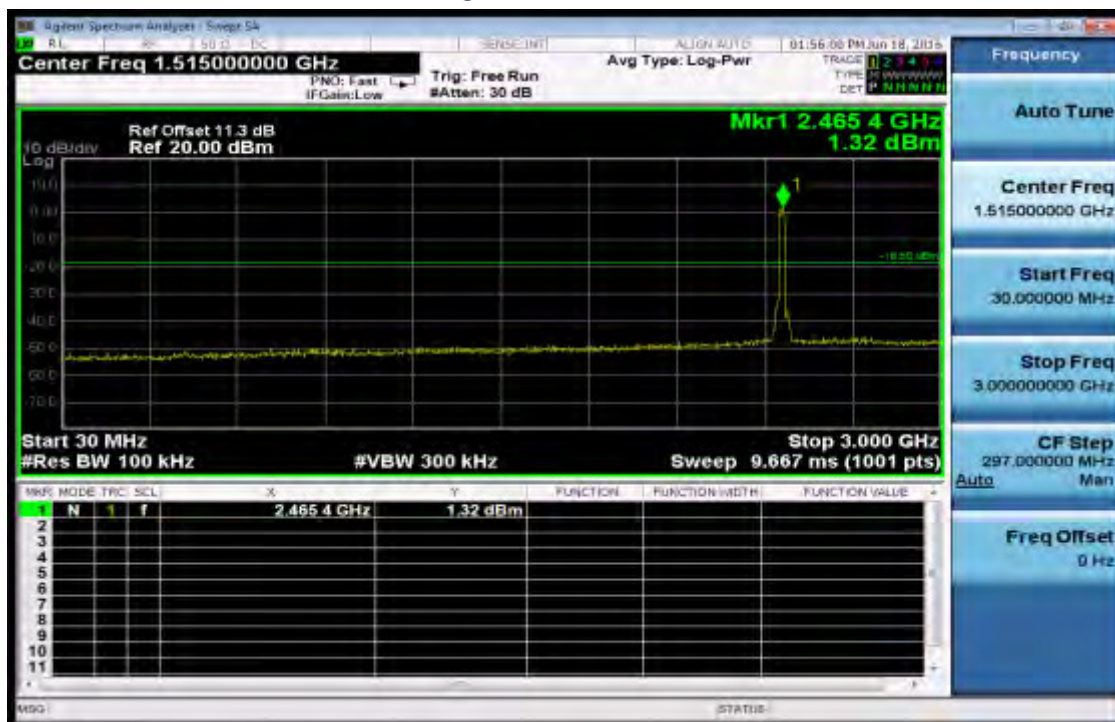
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_HT20

### Band Edges Test Data CH-Low



### Band Edges Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

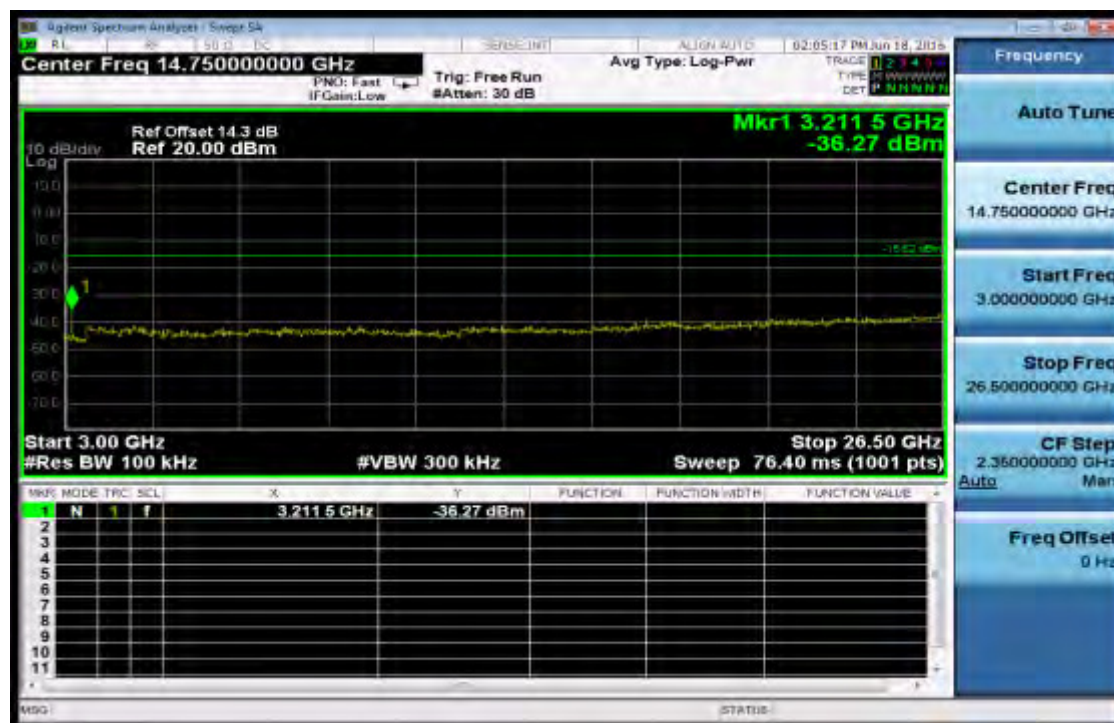
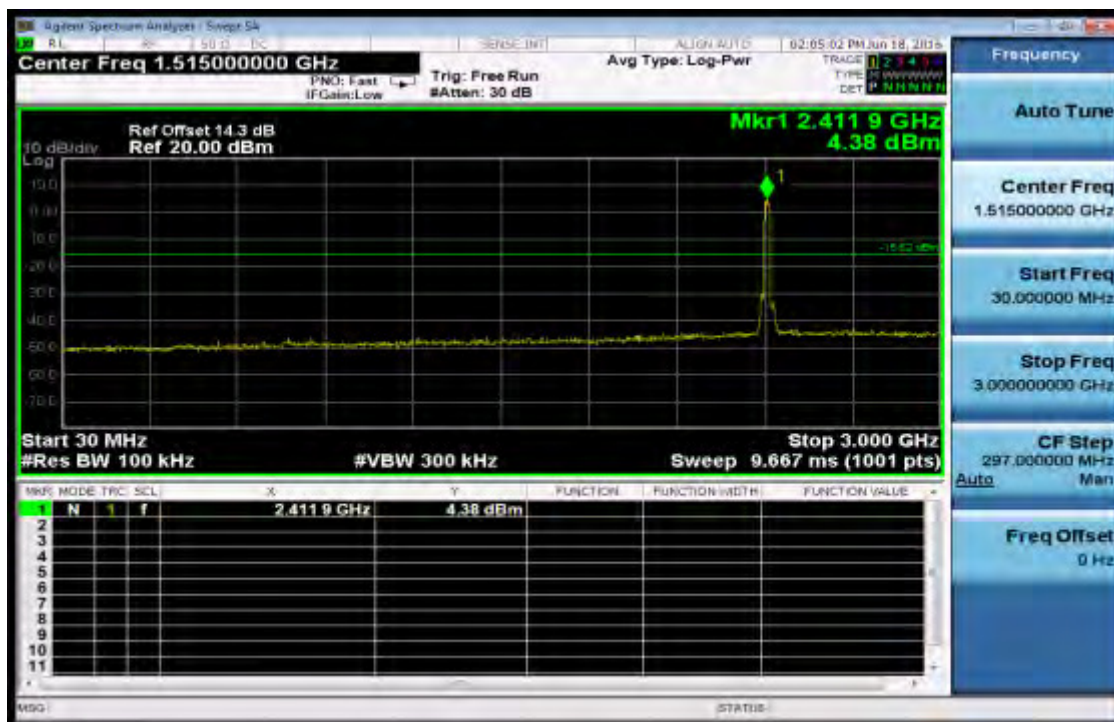
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_HT20

### Spurious Emission Test Data CH-Low



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

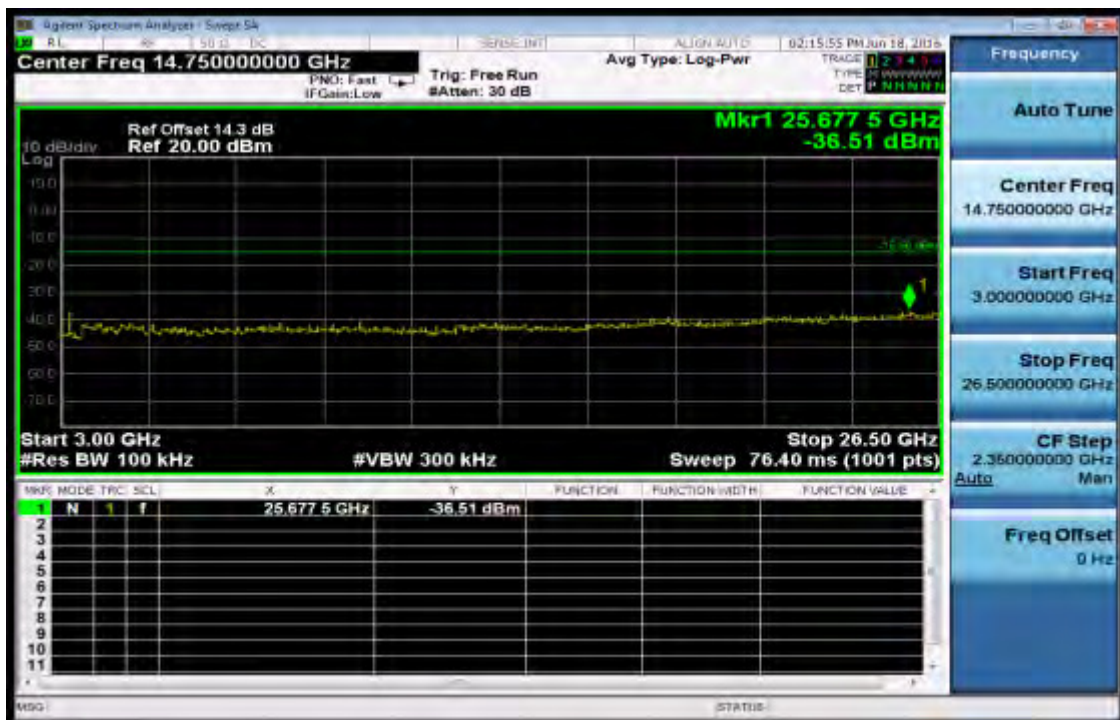
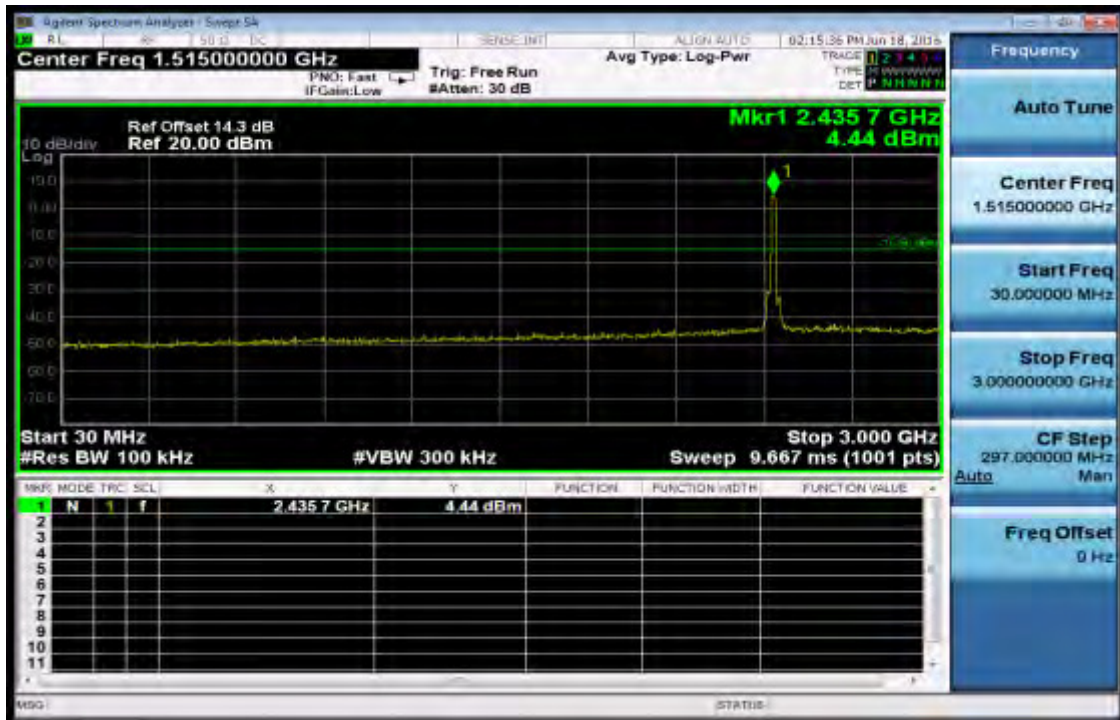
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, WuKungRoad, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

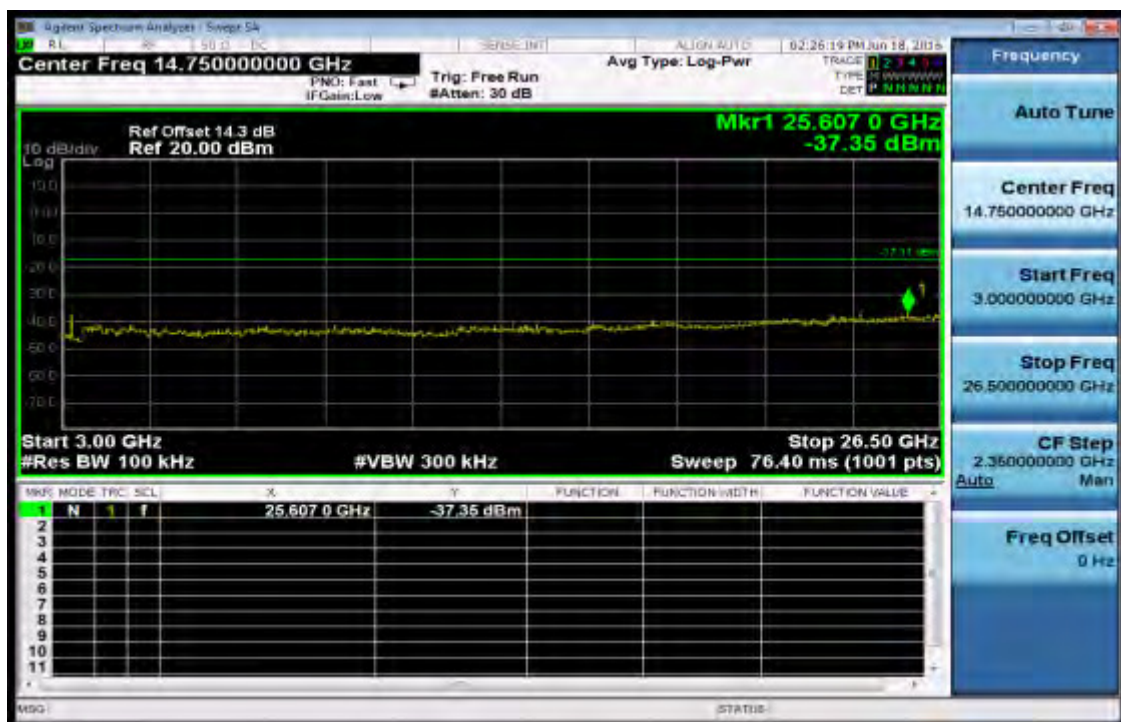
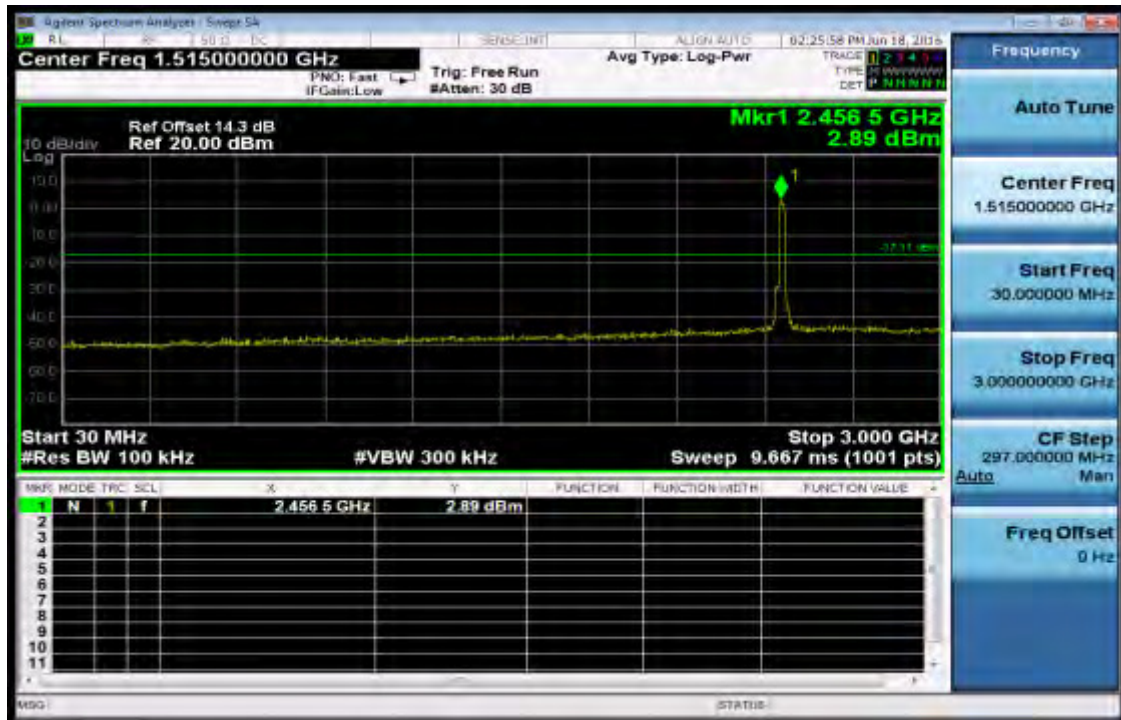
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_HT40

### Band Edges Test Data CH-Low



### Band Edges Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

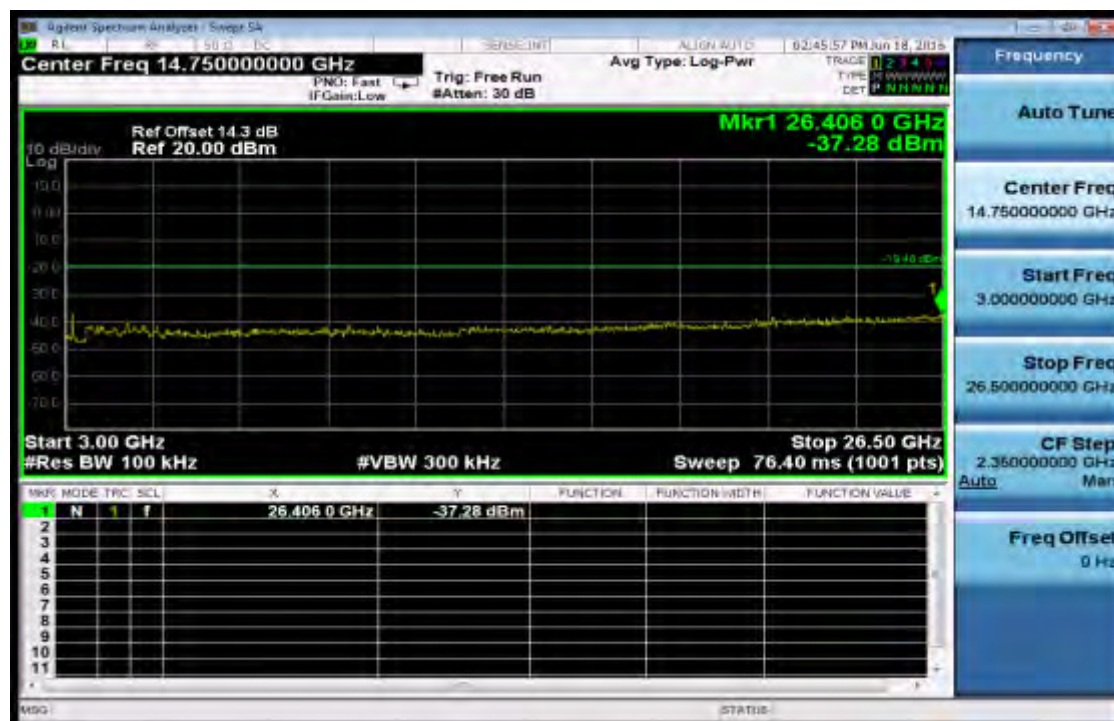
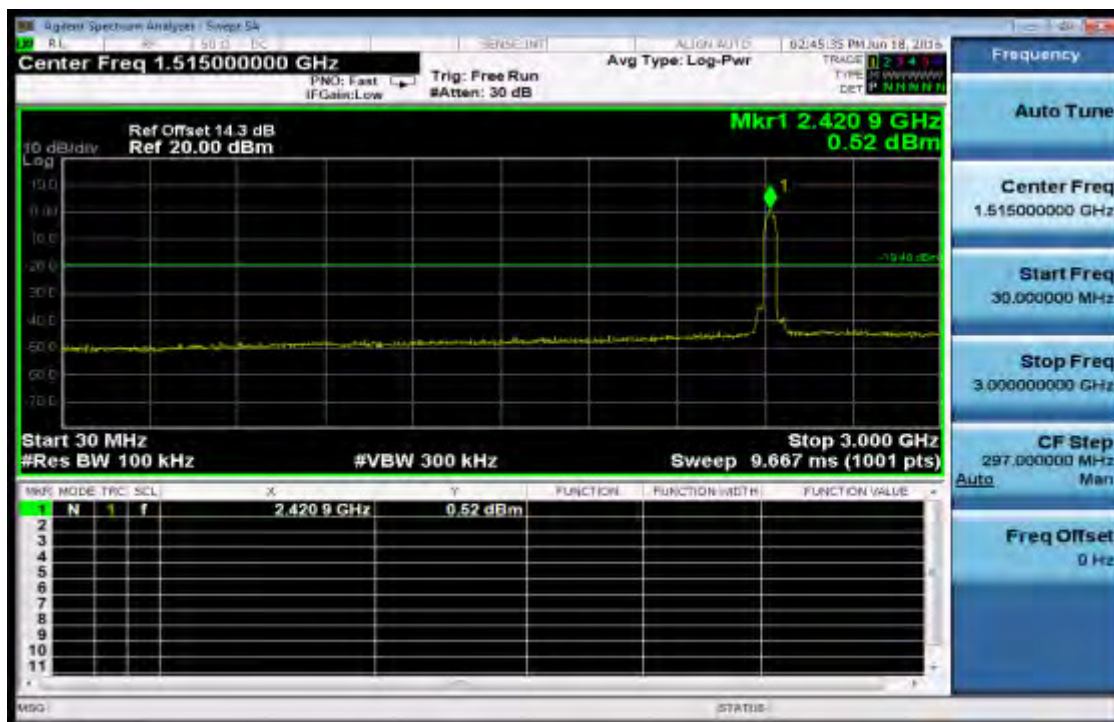
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 802.11n\_HT40

### Spurious Emission Test Data CH-Low



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

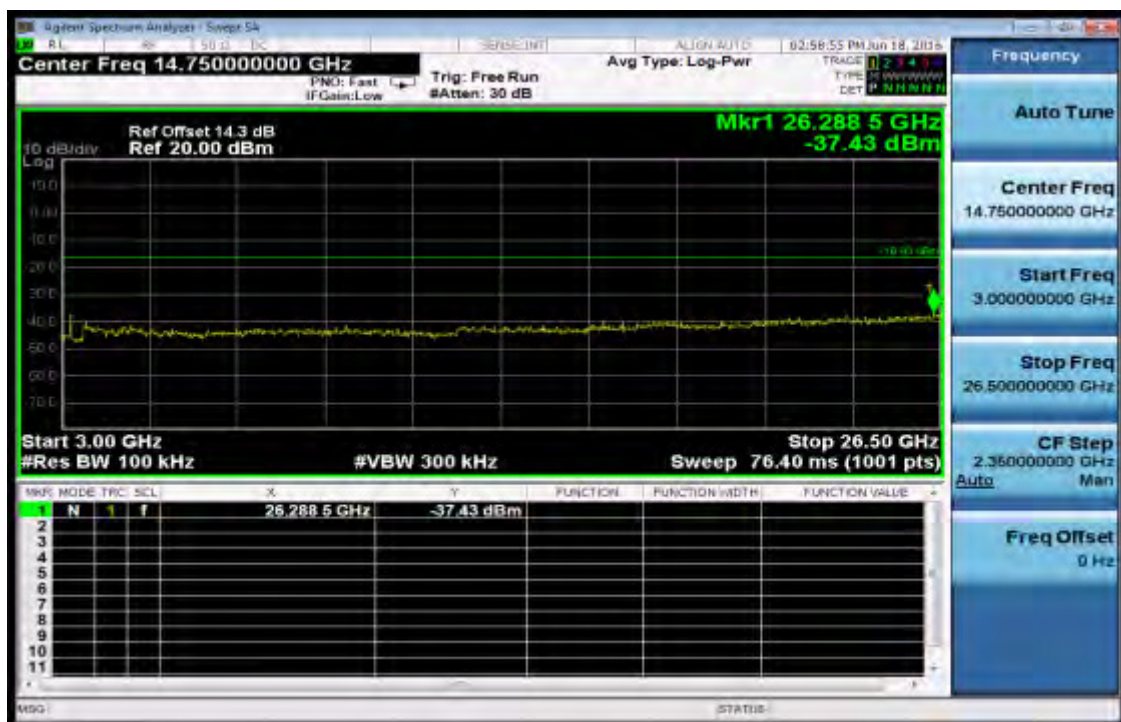
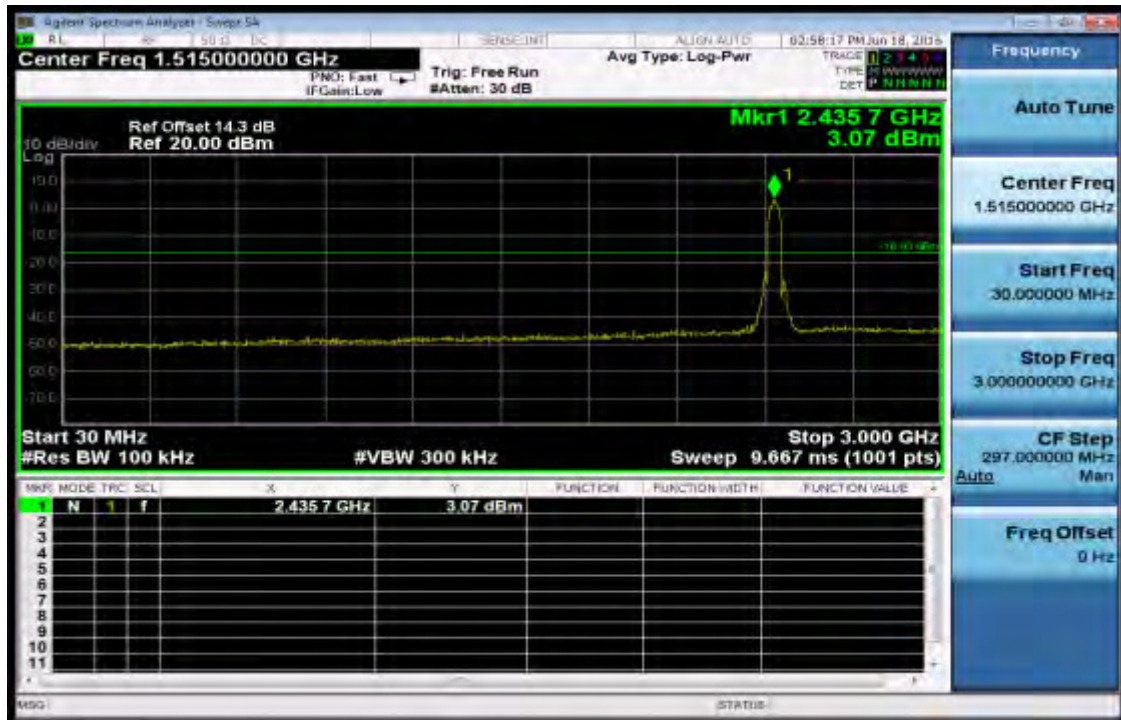
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-Mid



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

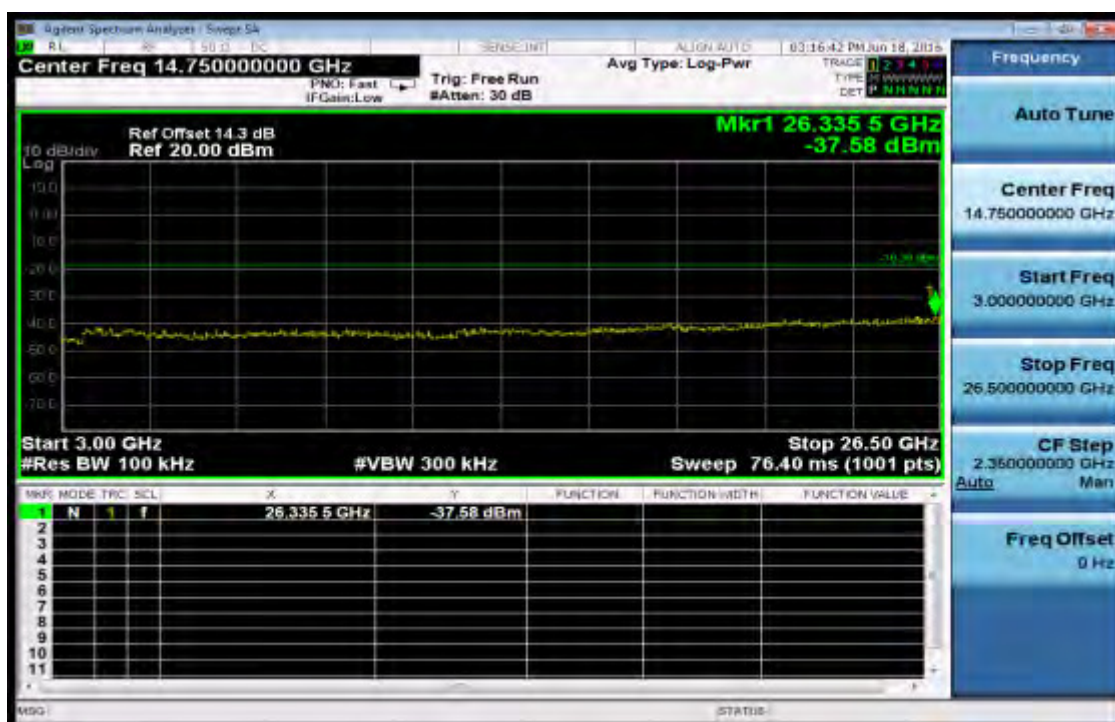
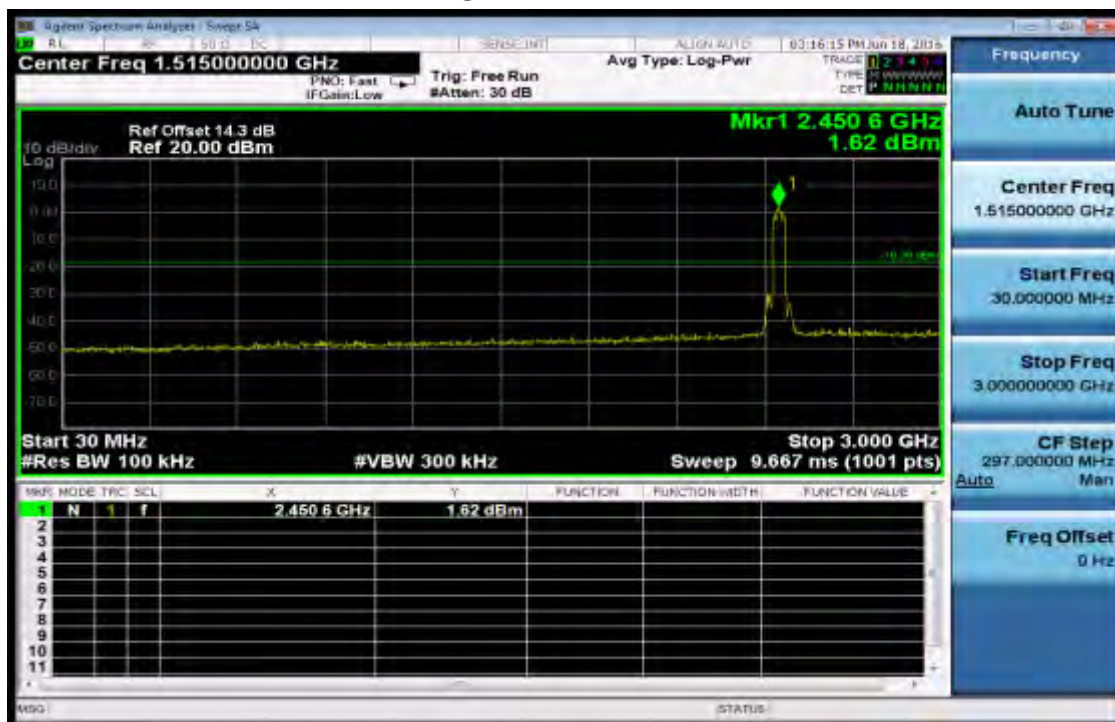
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Spurious Emission Test Data CH-High



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 11 RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT

### 11.1 Standard Applicable

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 limit as below.

And according to §15.33(a) (1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

| Frequency (MHz) | Field strength (microvolts/meter) | Distance (meters) |
|-----------------|-----------------------------------|-------------------|
| 0.009-0.490     | 2400/F(kHz)                       | 300               |
| 0.490-1.705     | 24000/F(kHz)                      | 30                |
| 1.705-30        | 30                                | 30                |
| 30-88           | 100                               | 3                 |
| 88-216          | 150                               | 3                 |
| 216-960         | 200                               | 3                 |
| Above 960       | 500                               | 3                 |

#### Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (dBμV/m)

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 11.2 Measurement Equipment Used:

| 966 Chamber       |                 |                                |               |            |            |
|-------------------|-----------------|--------------------------------|---------------|------------|------------|
| EQUIPMENT TYPE    | MFR             | MODEL NUMBER                   | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| EMI Test Receiver | R&S             | ESU 40                         | 100363        | 04/12/2016 | 04/11/2017 |
| Loop Antenna      | ETS-Lindgren    | 6502                           | 00143303      | 12/23/2015 | 12/22/2016 |
| Broadband Antenna | TESEQ           | CBL 6112D                      | 35240         | 10/28/2015 | 10/27/2016 |
| Horn Antenna      | ETS-Lindgren    | 3117                           | 00143272      | 12/16/2015 | 12/15/2016 |
| Horn Antenna      | Schwarzbeck     | BBHA9170                       | 185           | 07/24/2015 | 07/23/2016 |
| Pre Amplifier     | EMC Instruments | EMC330                         | 980096        | 12/12/2015 | 12/11/2016 |
| Pre Amplifier     | EMC Instruments | EMC0011830                     | 980199        | 12/12/2015 | 12/11/2016 |
| Pre Amplifier     | R&S             | SCU-18                         | 10204         | 12/12/2015 | 12/11/2016 |
| Pre Amplifier     | R&S             | SCU-26                         | 100780        | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | RG 214/U                       | 966Rx 9K-30M  | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | RG 214/U<br>SUCOFLEX 104       | 966Rx 30M-3G  | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 104                   | 966Rx 1G-18G  | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | mini 141-12<br>SUCOFLEX<br>104 | 966Rx 18G-40G | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 104                   | 966Tx 30M-18G | 12/12/2015 | 12/11/2016 |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 102                   | 966Tx 18G-40G | 12/12/2015 | 12/11/2016 |
| Attenuator        | WOKEN           | 218FS-10                       | RF27          | 12/12/2015 | 12/11/2016 |
| Site NSA          | SGS             | 966 Chamber C                  | SAC-C         | 03/04/2016 | 03/03/2017 |
| Site VSWR         | SGS             | 966 Chamber C                  | SAC-C         | 03/04/2016 | 03/03/2017 |
| DC Power Supply   | HOLA            | DP-3003                        | D7070035      | 05/04/2016 | 05/03/2017 |
| Controller        | MF              | MF-7802                        | N/A           | N.C.R.     | N.C.R.     |
| Antenna Master    | MF              | N/A                            | N/A           | N.C.R.     | N.C.R.     |
| Turn Table        | MF              | N/A                            | N/A           | N.C.R.     | N.C.R.     |
| Test Software     | World-Pallas    | Dr. E                          | V 3.0 Lite    | N.C.R.     | N.C.R.     |

NOTE: N.C.R refers to Not Calibrated Required.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

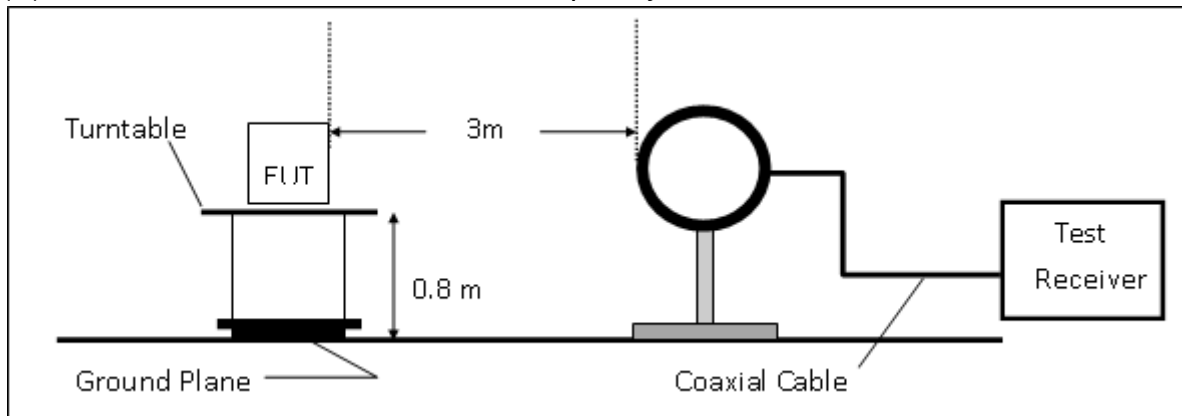
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

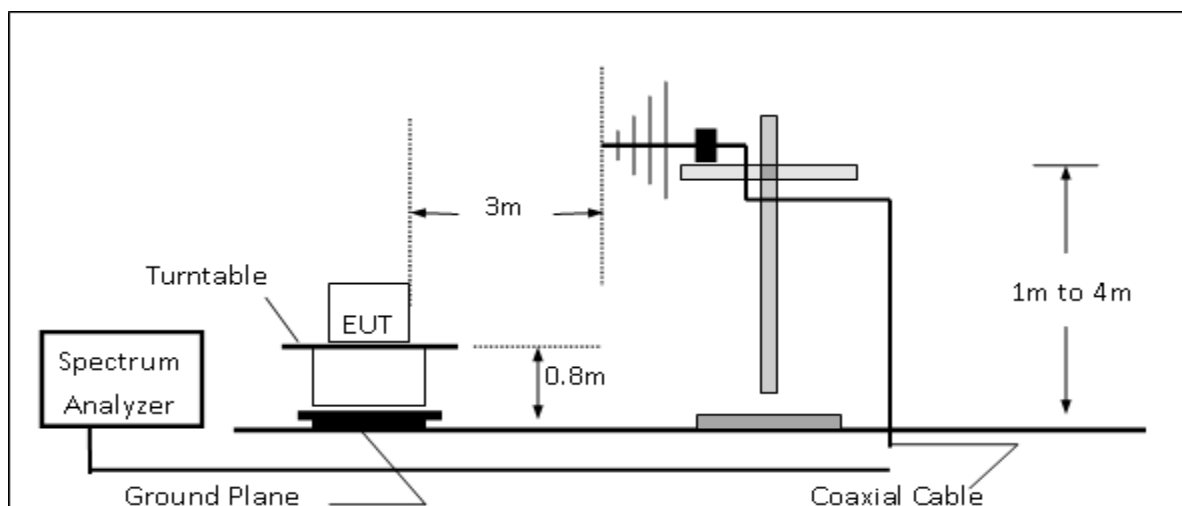
Member of SGS Group

### 11.3 Test SET-UP

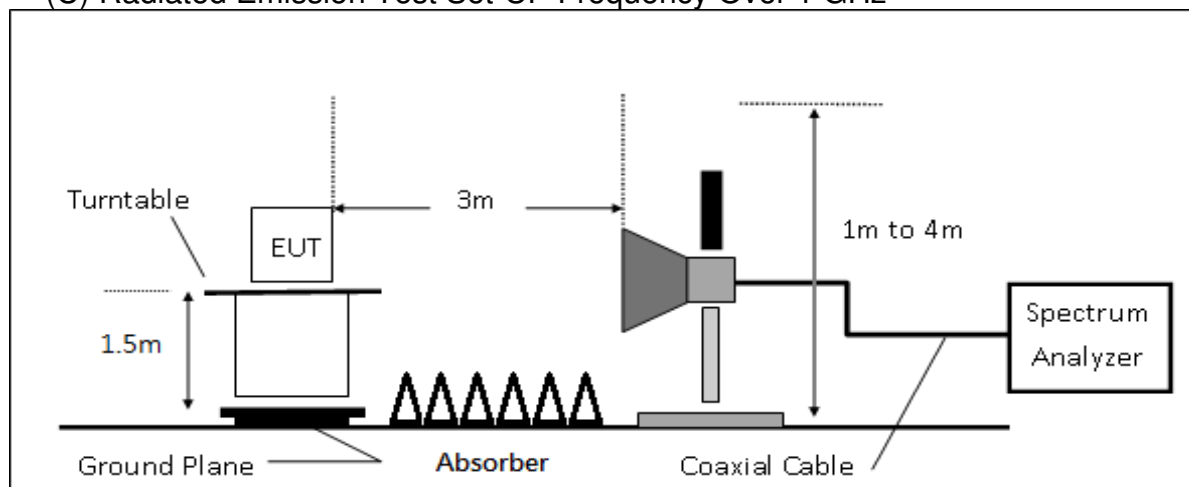
#### (A) Radiated Emission Test Set-UP Frequency Below 30MHz.



#### (B) Radiated Emission Test Set-Up, Frequency form 30MHz to 1000MHz



#### (C) Radiated Emission Test Set-UP Frequency Over 1 GHz



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

#### 11.4 Measurement Procedure

1. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
2. The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
4. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
5. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.
6. Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and Quasi-peak (QP) at frequency below 1 GHz.
7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
9. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
10. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
11. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. On spectrum, change spectrum mode in linear display mode, and reduce VBW = 10Hz if average reading is measured.
12. Repeat above procedures until all default test channel measured were complete.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

### 11.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

|       |                        |                                            |
|-------|------------------------|--------------------------------------------|
| Where | FS = Field Strength    | CL = Cable Attenuation Factor (Cable Loss) |
|       | RA = Reading Amplitude | AG = Amplifier Gain                        |
|       | AF = Antenna Factor    |                                            |

Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)

Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

#### Note :

“F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

### 11.6 Test Results of Radiated Spurious Emissions form 9 kHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

### 11.7 Measurement Result

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Band Edge Measurement Result (802.11b)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11b   | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2390.00 | E       | Peak          | 44.66                  | 0.92   | 45.59     | 74        | -28.41 |
| 2390.00 | E       | Average       | 32.73                  | 0.92   | 33.65     | 54        | -20.35 |

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11b   | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2349.72 | S       | Peak          | 46.07                  | 0.72   | 46.79     | 74        | -27.21 |
| 2349.72 | S       | Average       | 32.40                  | 0.72   | 33.12     | 54        | -20.88 |
| 2390.00 | E       | Peak          | 44.33                  | 0.92   | 45.25     | 74        | -28.75 |
| 2390.00 | E       | Average       | 32.51                  | 0.92   | 33.43     | 54        | -20.57 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11b    | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 43.92                  | 1.16   | 45.08     | 74        | -28.92 |
| 2483.50 | E       | Average       | 32.45                  | 1.16   | 33.61     | 54        | -20.39 |

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11b    | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 44.16                  | 1.16   | 45.32     | 74        | -28.68 |
| 2483.50 | E       | Average       | 32.68                  | 1.16   | 33.84     | 54        | -20.16 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Band Edge Measurement Result (802.11g)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11g   | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2389.20 | S       | Peak          | 72.80                  | 0.91   | 73.71     | 74        | -0.29  |
| 2389.20 | S       | Average       | 49.77                  | 0.91   | 50.68     | 54        | -3.32  |
| 2390.00 | E       | Peak          | 72.02                  | 0.92   | 72.94     | 74        | -1.06  |
| 2390.00 | E       | Average       | 51.07                  | 0.92   | 51.99     | 54        | -2.01  |

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11g   | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2390.00 | E       | Peak          | 67.73                  | 0.92   | 68.65     | 74        | -5.35  |
| 2390.00 | E       | Average       | 46.61                  | 0.92   | 47.53     | 54        | -6.47  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11g    | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 71.48                  | 1.16   | 72.64     | 74        | -1.36  |
| 2483.50 | E       | Average       | 50.94                  | 1.16   | 52.10     | 54        | -1.90  |

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11g    | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 60.63                  | 1.16   | 61.78     | 74        | -12.22 |
| 2483.50 | E       | Average       | 39.63                  | 1.16   | 40.79     | 54        | -13.21 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Band Edge Measurement Result (802.11\_HT20)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11n20 | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2390.00 | E       | Peak          | 70.11                  | 0.92   | 71.04     | 74        | -2.96  |
| 2390.00 | E       | Average       | 48.98                  | 0.92   | 49.90     | 54        | -4.10  |

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11n20 | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2390.00 | E       | Peak          | 65.16                  | 0.92   | 66.08     | 74        | -7.92  |
| 2390.00 | E       | Average       | 44.67                  | 0.92   | 45.59     | 54        | -8.41  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20  | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 71.64                  | 1.16   | 72.80     | 74        | -1.20  |
| 2483.50 | E       | Average       | 50.11                  | 1.16   | 51.27     | 54        | -2.73  |

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20  | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 67.16                  | 1.16   | 68.32     | 74        | -5.68  |
| 2483.50 | E       | Average       | 46.25                  | 1.16   | 47.41     | 54        | -6.59  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Band Edge Measurement Result (802.11\_HT40)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11n40 | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2422 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2387.76 | S       | Peak          | 71.53                  | 0.89   | 72.42     | 74        | -1.58  |
| 2387.76 | S       | Average       | 48.88                  | 0.89   | 49.77     | 54        | -4.23  |
| 2390.00 | E       | Peak          | 69.85                  | 0.92   | 70.78     | 74        | -3.22  |
| 2390.00 | E       | Average       | 48.96                  | 0.92   | 49.88     | 54        | -4.12  |

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11n40 | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2422 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2390.00 | E       | Peak          | 64.57                  | 0.92   | 65.50     | 74        | -8.50  |
| 2390.00 | E       | Average       | 43.36                  | 0.92   | 44.28     | 54        | -9.72  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40  | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2452 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Vertical       |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 71.81                  | 1.16   | 72.97     | 74        | -1.03  |
| 2483.50 | E       | Average       | 49.09                  | 1.16   | 50.25     | 54        | -3.75  |
| 2484.10 | S       | Peak          | 72.20                  | 1.16   | 73.36     | 74        | -0.64  |
| 2484.10 | S       | Average       | 49.07                  | 1.16   | 50.23     | 54        | -3.77  |

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40  | Test Date :                | 2016/6/13      |
| Fundamental Frequency : | 2452 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | BE CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Horizontal     |

| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 2483.50 | E       | Peak          | 62.73                  | 1.16   | 63.89     | 74        | -10.11 |
| 2483.50 | E       | Average       | 45.12                  | 1.16   | 46.28     | 54        | -7.72  |
| 2484.10 | S       | Peak          | 63.49                  | 1.16   | 64.65     | 74        | -9.35  |
| 2484.10 | S       | Average       | 44.99                  | 1.16   | 46.15     | 54        | -7.85  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

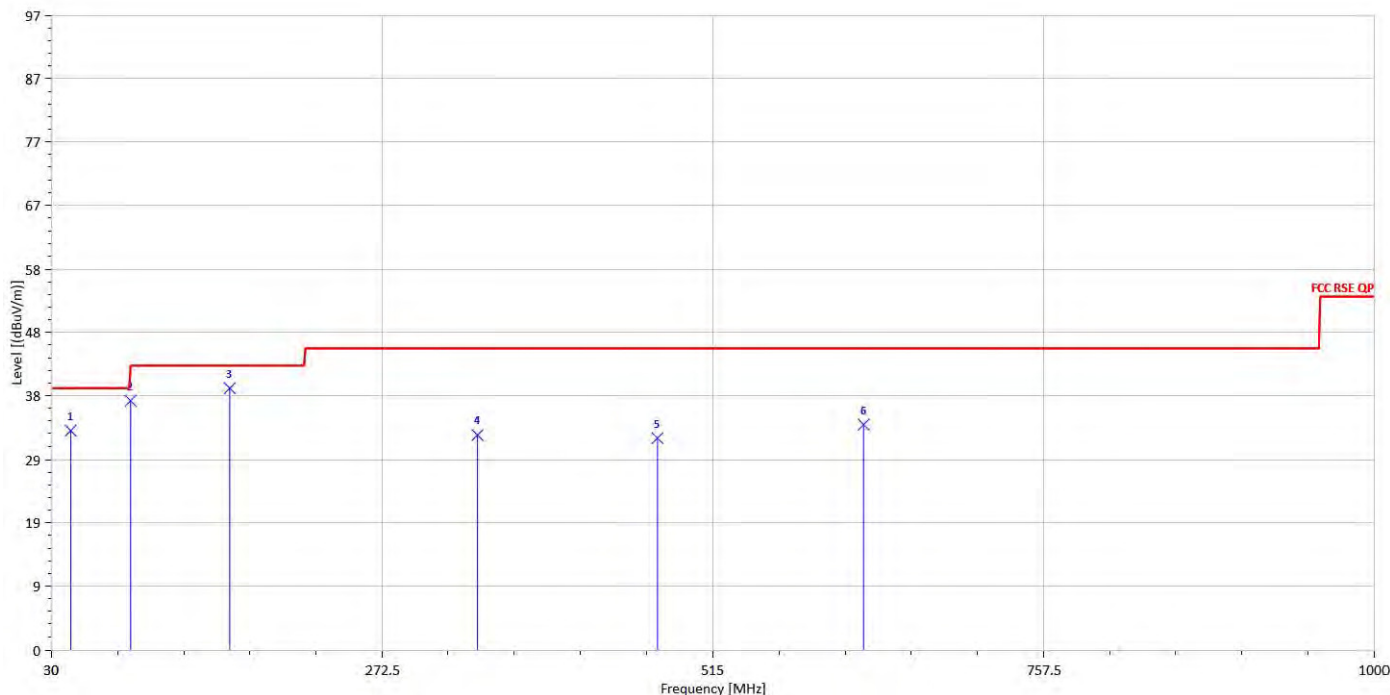
[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Below 1GHz Worst-Case Data:

### Radiated Spurious Emission Measurement Result (802.11 g)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11g   | Test Date :                | 2016/6/15      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | Tx CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 44.55        | S               | QP                           | 49.50                             | -16.05       | 33.45                  | 40                     | -6.55        |
| 88.20        | S               | Peak                         | 57.82                             | -19.77       | 38.05                  | 43.5                   | -5.45        |
| 160.95       | S               | Peak                         | 57.64                             | -17.63       | 40.01                  | 43.5                   | -3.49        |
| 342.34       | S               | Peak                         | 44.37                             | -11.62       | 32.75                  | 46                     | -13.25       |
| 474.26       | S               | Peak                         | 40.38                             | -8.09        | 32.29                  | 46                     | -13.71       |
| 625.58       | S               | Peak                         | 40.46                             | -6.10        | 34.36                  | 46                     | -11.64       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

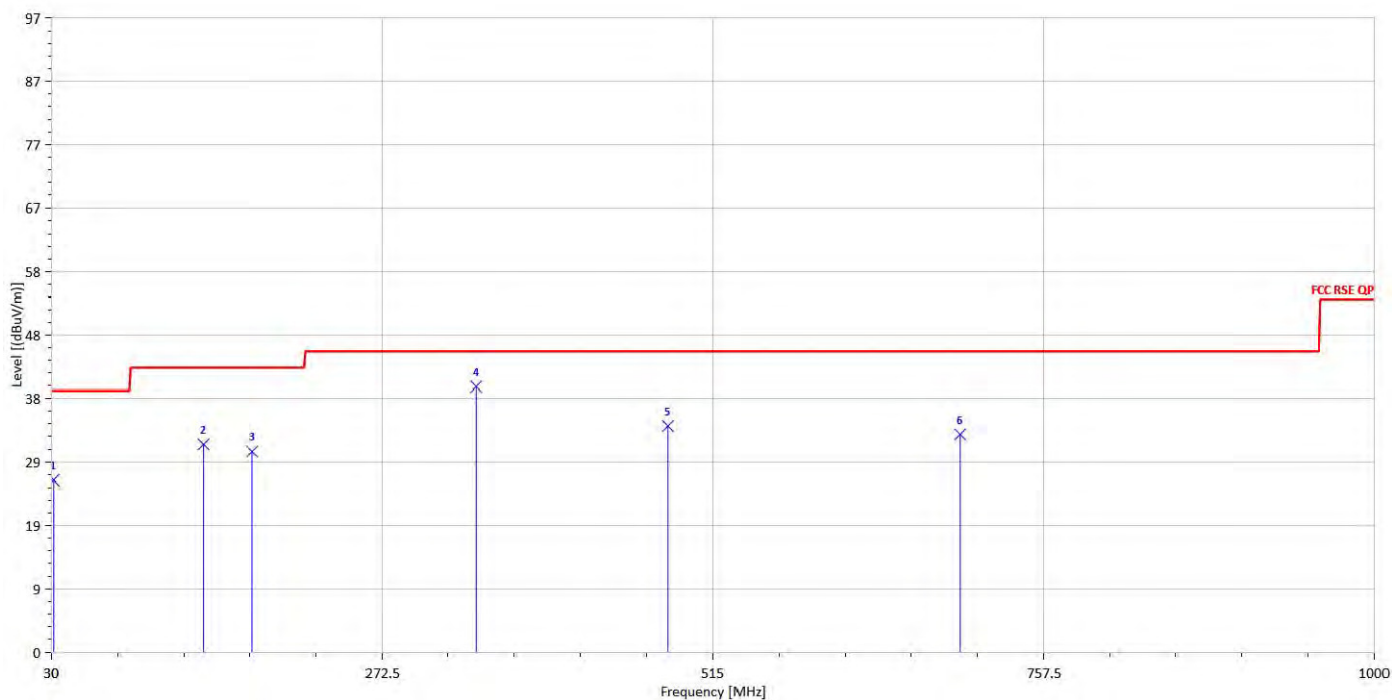
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/15  
Fundamental Frequency : 2412 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 31.94        | S               | Peak                         | 34.55                             | -8.22        | 26.33                  | 40                     | -13.67       |
| 141.55       | S               | Peak                         | 48.04                             | -16.25       | 31.79                  | 43.5                   | -11.71       |
| 177.44       | S               | Peak                         | 49.21                             | -18.53       | 30.68                  | 43.5                   | -12.82       |
| 341.37       | S               | Peak                         | 52.27                             | -11.66       | 40.61                  | 46                     | -5.39        |
| 482.02       | S               | Peak                         | 42.49                             | -7.87        | 34.62                  | 46                     | -11.38       |
| 696.39       | S               | Peak                         | 38.43                             | -5.10        | 33.33                  | 46                     | -12.67       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

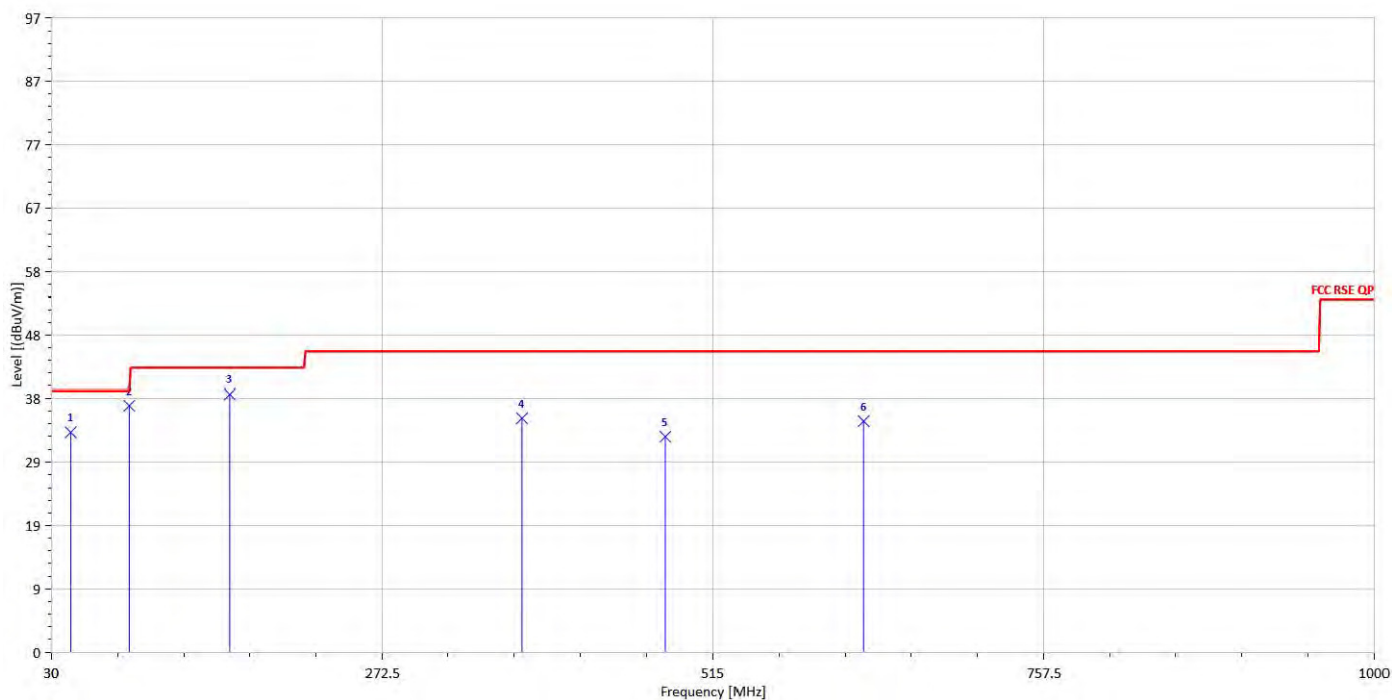
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/15  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 44.55        | S               | QP                           | 49.70                             | -16.05       | 33.65                  | 40                     | -6.35        |
| 87.23        | S               | Peak                         | 57.66                             | -19.92       | 37.74                  | 40                     | -2.26        |
| 160.95       | S               | Peak                         | 57.11                             | -17.63       | 39.48                  | 43.5                   | -4.02        |
| 375.32       | S               | Peak                         | 46.35                             | -10.53       | 35.82                  | 46                     | -10.18       |
| 480.08       | S               | Peak                         | 40.78                             | -7.81        | 32.97                  | 46                     | -13.03       |
| 625.58       | S               | Peak                         | 41.46                             | -6.10        | 35.36                  | 46                     | -10.64       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

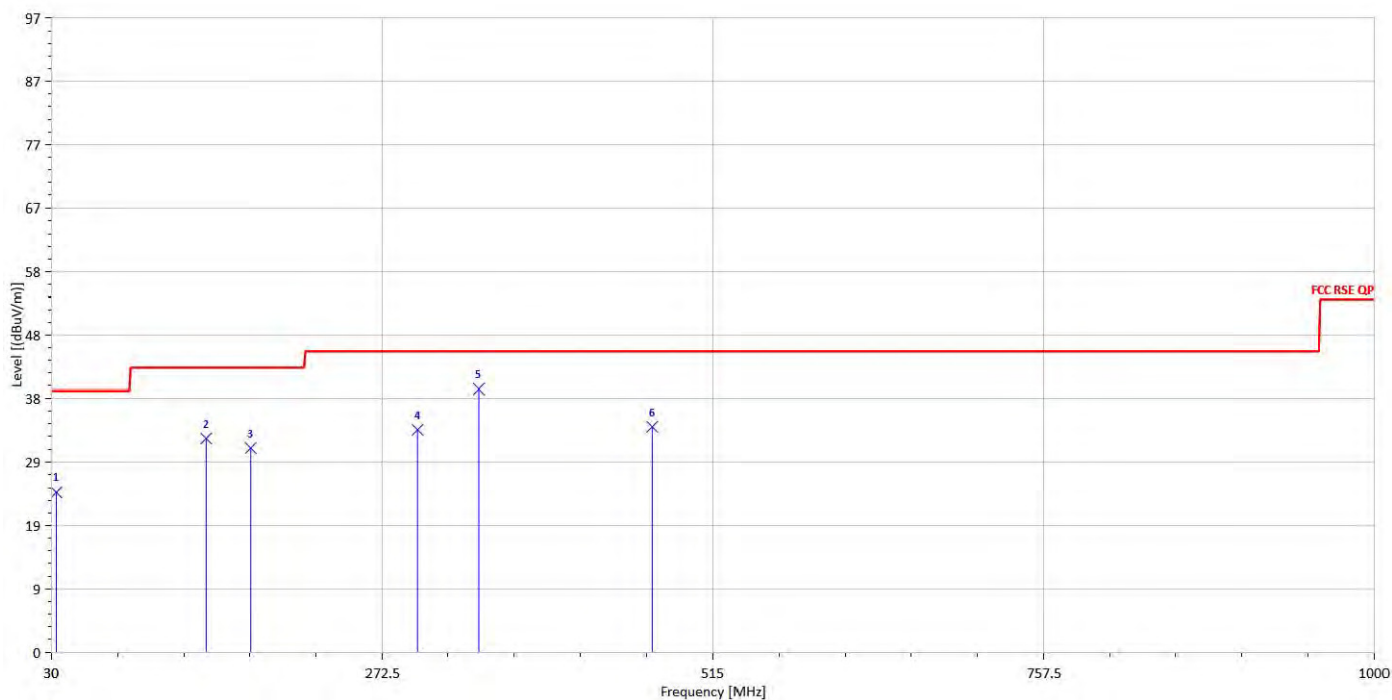
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/15  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 33.88        | S               | Peak                         | 33.78                             | -9.27        | 24.51                  | 40                     | -15.49       |
| 143.49       | S               | Peak                         | 49.01                             | -16.32       | 32.69                  | 43.5                   | -10.81       |
| 176.47       | S               | Peak                         | 49.73                             | -18.52       | 31.21                  | 43.5                   | -12.29       |
| 298.69       | S               | Peak                         | 47.16                             | -13.13       | 34.03                  | 46                     | -11.97       |
| 343.31       | S               | Peak                         | 51.87                             | -11.61       | 40.26                  | 46                     | -5.74        |
| 470.38       | S               | Peak                         | 42.33                             | -7.85        | 34.49                  | 46                     | -11.51       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

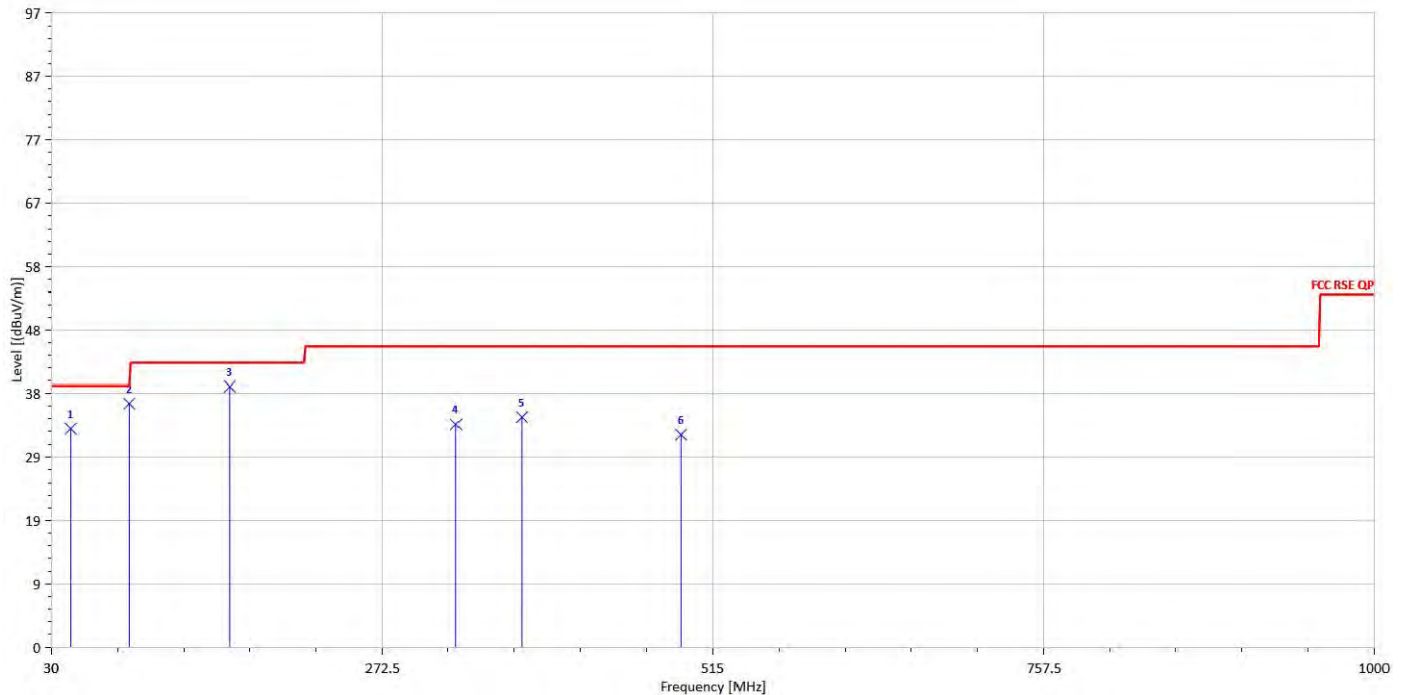
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/15  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 44.55        | S               | QP                           | 49.50                             | -16.05       | 33.45                  | 40                     | -6.55        |
| 87.23        | S               | Peak                         | 57.22                             | -19.92       | 37.30                  | 40                     | -2.70        |
| 160.95       | S               | Peak                         | 57.51                             | -17.63       | 39.88                  | 43.5                   | -3.62        |
| 326.82       | S               | Peak                         | 46.08                             | -11.99       | 34.09                  | 46                     | -11.91       |
| 375.32       | S               | Peak                         | 45.73                             | -10.53       | 35.21                  | 46                     | -10.79       |
| 491.72       | S               | Peak                         | 40.28                             | -7.76        | 32.51                  | 46                     | -13.49       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

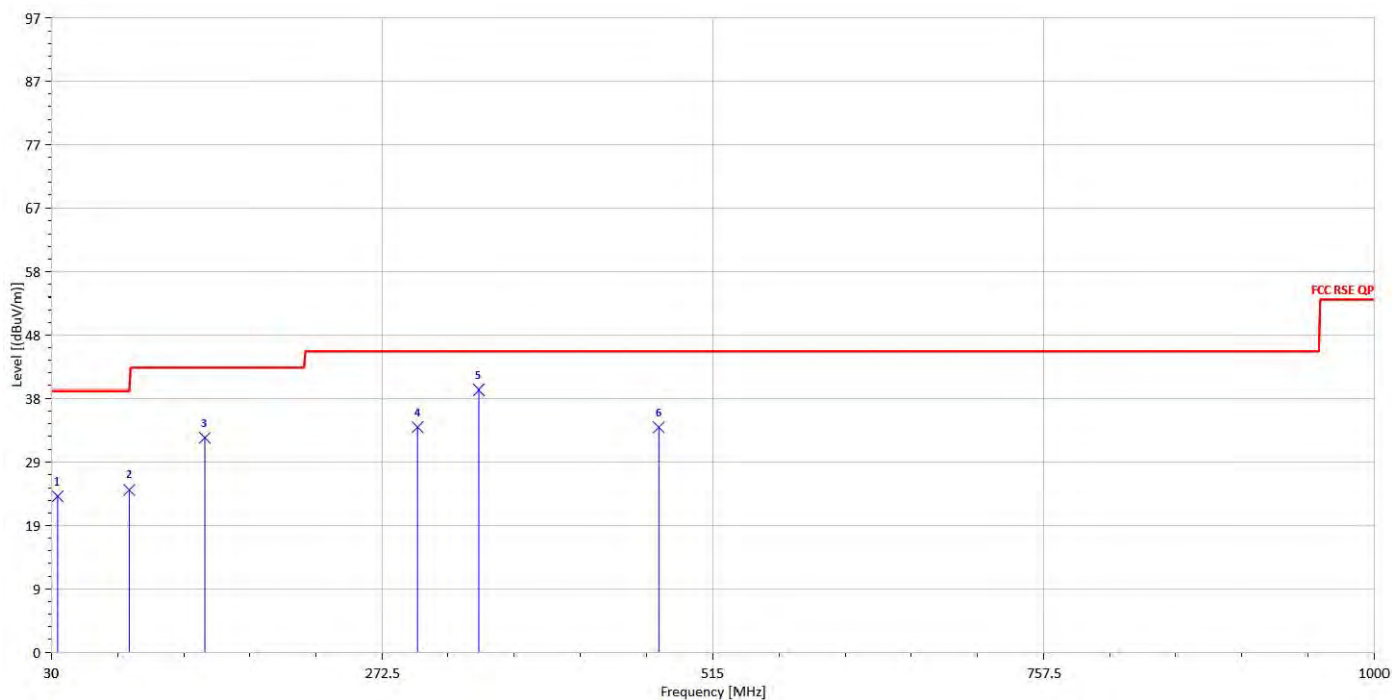
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g      Test Date : 2016/6/15  
 Fundamental Frequency : 2462 MHz      Temp. / Humi. : 22.7deg\_C/57RH  
 Operation Band : Tx CH High      Test Engineer : Pony  
 EUT Pol. : H      Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 34.85        | S               | Peak                         | 33.70                             | -9.78        | 23.92                  | 40                     | -16.08       |
| 87.23        | S               | Peak                         | 44.81                             | -19.92       | 24.89                  | 40                     | -15.11       |
| 142.52       | S               | Peak                         | 49.06                             | -16.26       | 32.81                  | 43.5                   | -10.69       |
| 298.69       | S               | Peak                         | 47.58                             | -13.13       | 34.45                  | 46                     | -11.55       |
| 343.31       | S               | Peak                         | 51.75                             | -11.61       | 40.14                  | 46                     | -5.86        |
| 475.23       | S               | Peak                         | 42.48                             | -8.05        | 34.43                  | 46                     | -11.57       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

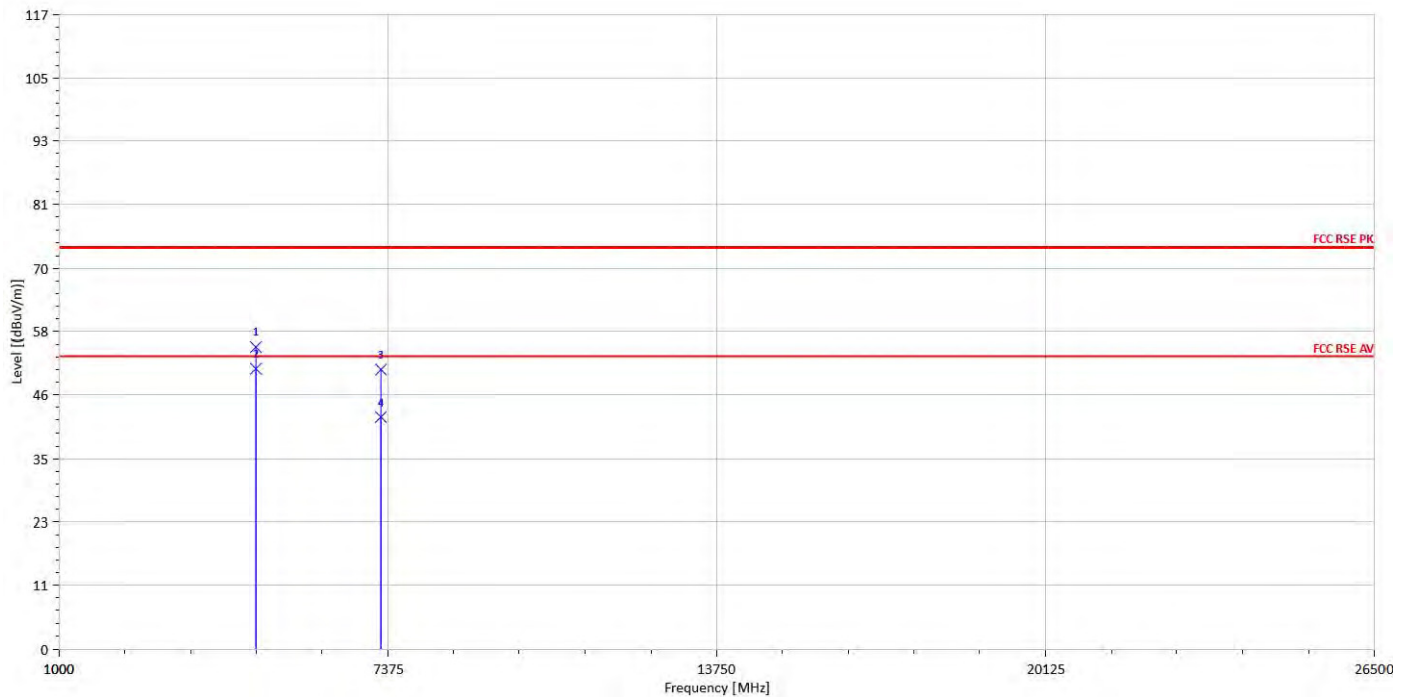
www.tw.sgs.com

Member of SGS Group

## Above 1GHz Data:

### Radiated Spurious Emission Measurement Result (802.11 b)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11b   | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2412 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | Tx CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4824.00      | H               | Peak                         | 48.14                             | 7.58         | 55.72                  | 74                     | -18.28       |
| 4824.00      | H               | Average                      | 44.12                             | 7.58         | 51.70                  | 54                     | -2.30        |
| 7236.00      | H               | Peak                         | 36.97                             | 14.56        | 51.53                  | 74                     | -22.47       |
| 7236.00      | H               | Average                      | 28.13                             | 14.56        | 42.69                  | 54                     | -11.31       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

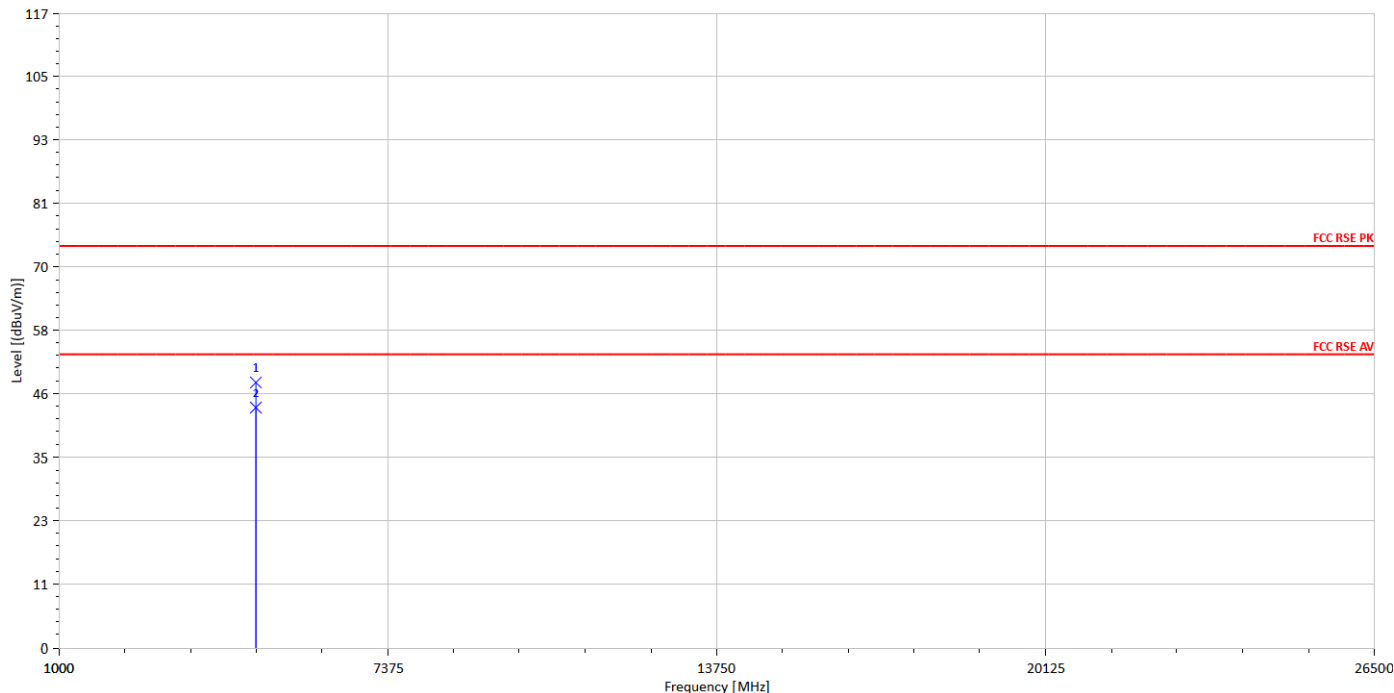
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11b Test Date : 2016/6/14  
Fundamental Frequency : 2412 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 4824.00 | H       | Peak     | 41.37         | 7.58   | 48.95  | 74     | -25.05 |
| 4824.00 | H       | Average  | 36.69         | 7.58   | 44.27  | 54     | -9.73  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

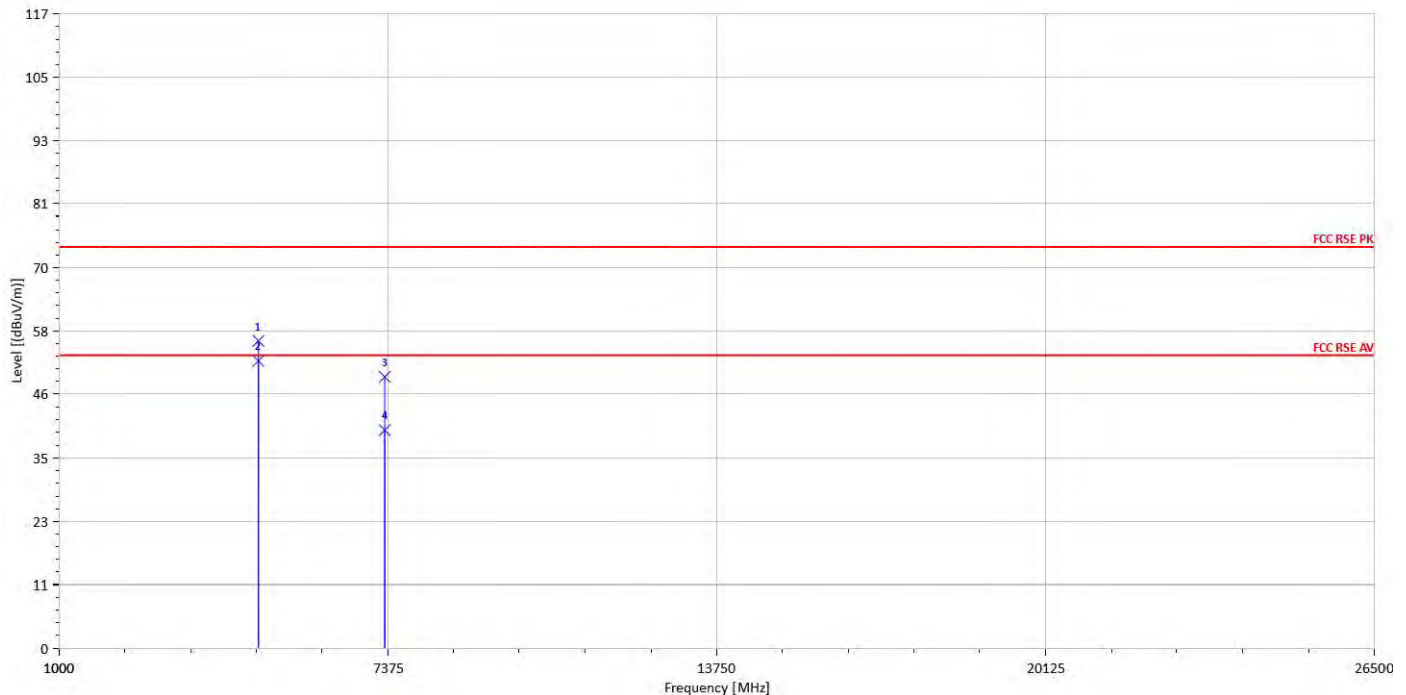
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11b Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 4874.00 | H       | Peak     | 48.78         | 7.91   | 56.69  | 74     | -17.31 |
| 4874.00 | H       | Average  | 45.07         | 7.91   | 52.98  | 54     | -1.02  |
| 7311.00 | H       | Peak     | 35.50         | 14.47  | 49.97  | 74     | -24.03 |
| 7311.00 | H       | Average  | 25.77         | 14.47  | 40.24  | 54     | -13.76 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

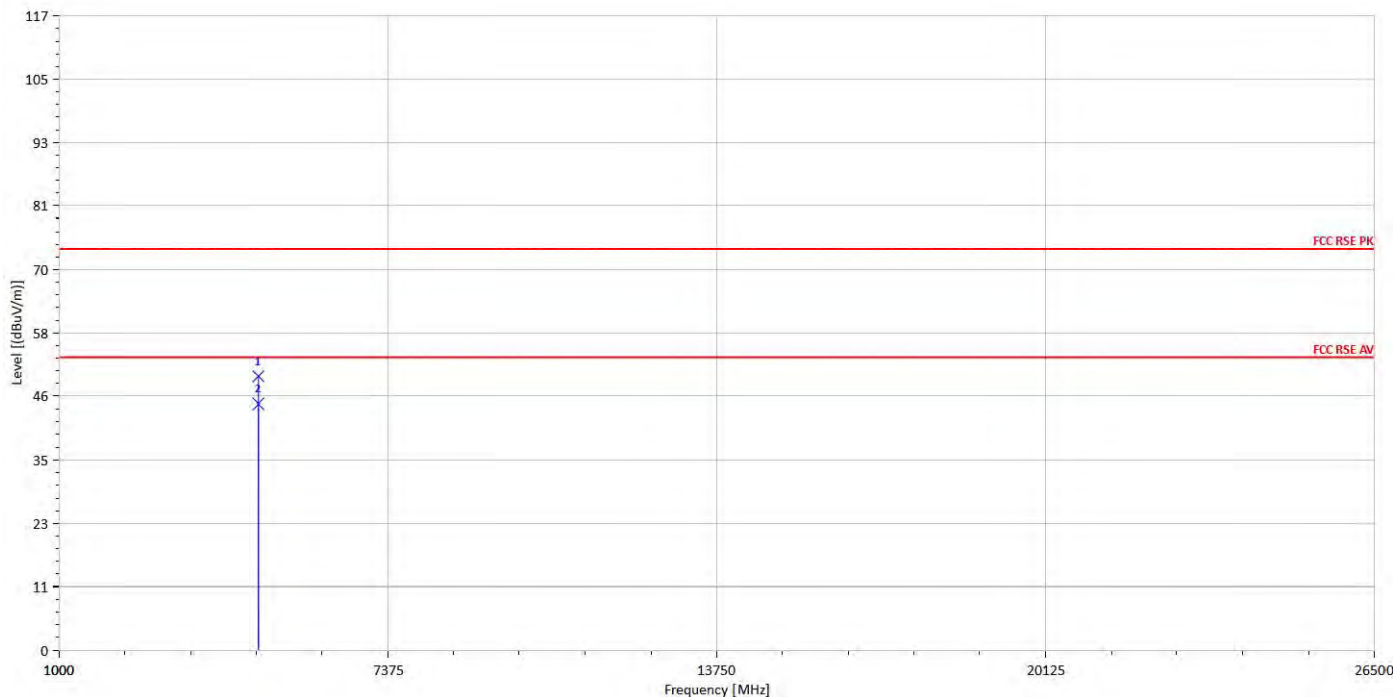
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11b Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 4874.00 | H       | Peak          | 42.57                  | 7.91   | 50.48     | 74        | -23.52 |
| 4874.00 | H       | Average       | 37.51                  | 7.91   | 45.42     | 54        | -8.58  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

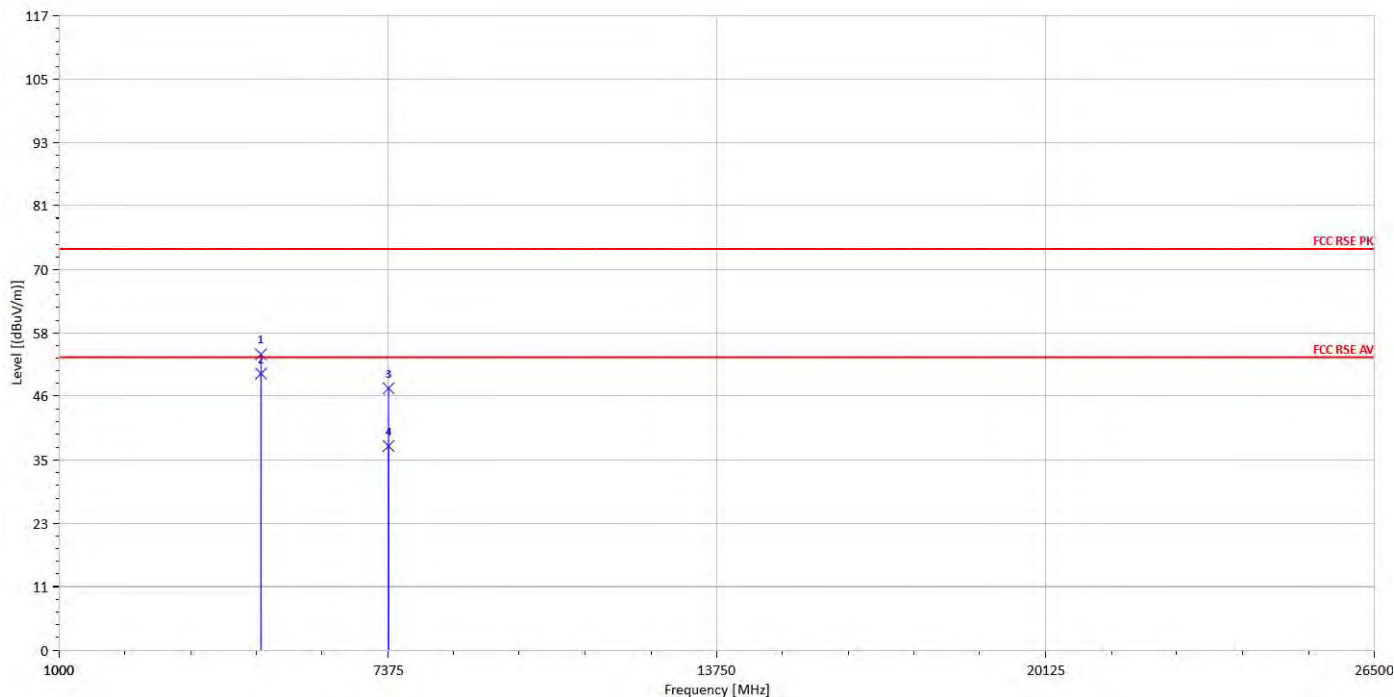
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11b    | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2462 MHz   | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | Tx CH High | Test Engineer :            | Pony           |
| EUT Pol. :              | H          | Measurement Antenna Pol. : | Vertical       |



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4924.00 | H       | Peak     | 46.65         | 7.92   | 54.57  | 74     | -19.43 |
| 4924.00 | H       | Average  | 43.03         | 7.92   | 50.95  | 54     | -3.05  |
| 7386.00 | H       | Peak     | 33.23         | 15.00  | 48.23  | 74     | -25.77 |
| 7386.00 | H       | Average  | 22.65         | 15.00  | 37.65  | 54     | -16.35 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

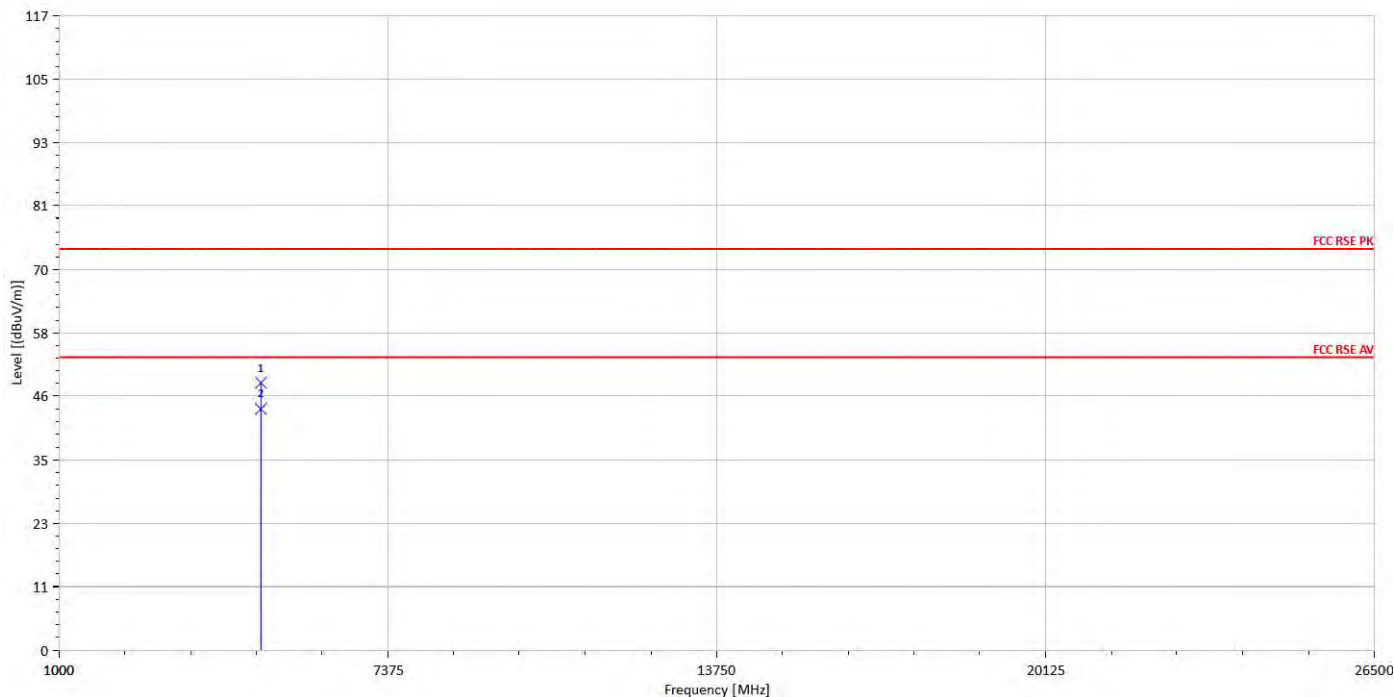
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11b Test Date : 2016/6/14  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 4924.00 | H       | Peak     | 41.34         | 7.92   | 49.26  | 74     | -24.74 |
| 4924.00 | H       | Average  | 36.63         | 7.92   | 44.55  | 54     | -9.45  |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

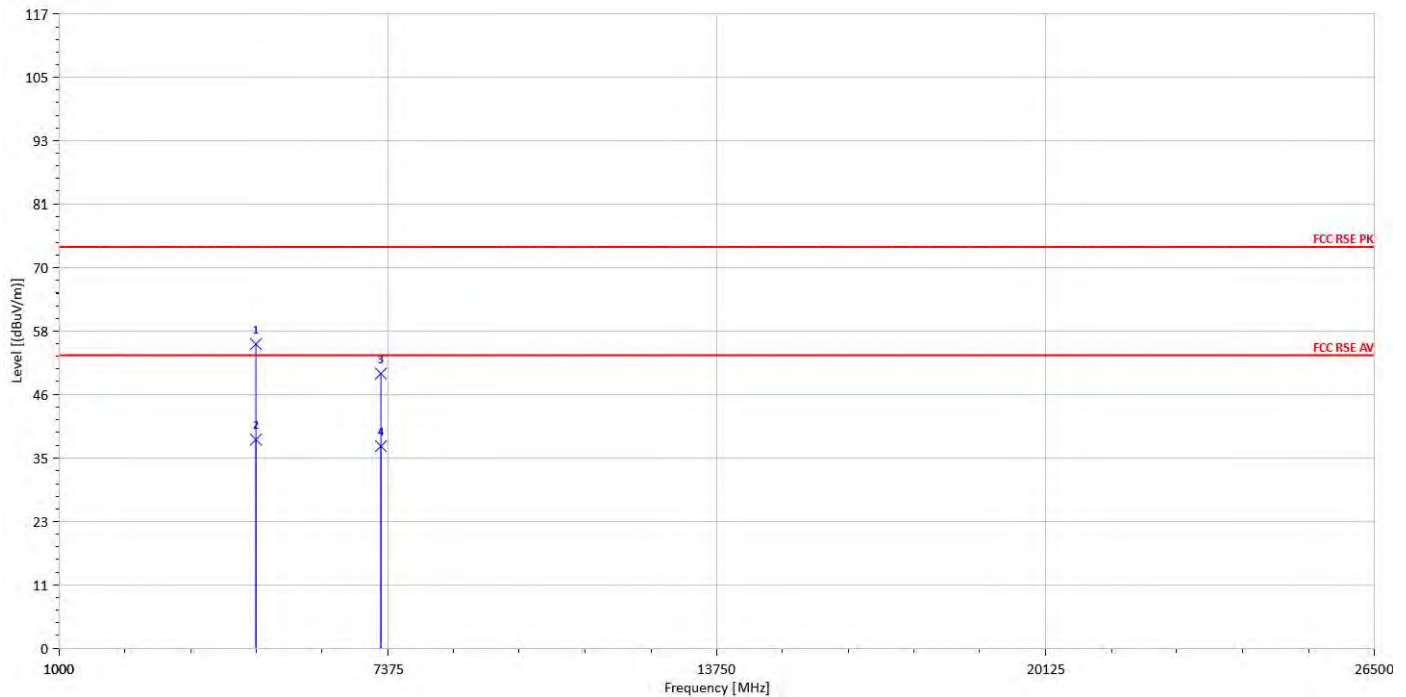
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Spurious Emission Measurement Result (802.11 g)

Operation Mode : 802.11g      Test Date : 2016/6/14  
Fundamental Frequency : 2412 MHz      Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low      Test Engineer : Pony  
EUT Pol. : H      Measurement Antenna Pol. : Vertical



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 4824.00 | H       | Peak     | 48.53         | 7.58   | 56.11  | 74     | -17.89 |
| 4824.00 | H       | Average  | 30.90         | 7.58   | 38.48  | 54     | -15.52 |
| 7236.00 | H       | Peak     | 36.04         | 14.56  | 50.60  | 74     | -23.40 |
| 7236.00 | H       | Average  | 22.69         | 14.56  | 37.25  | 54     | -16.75 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

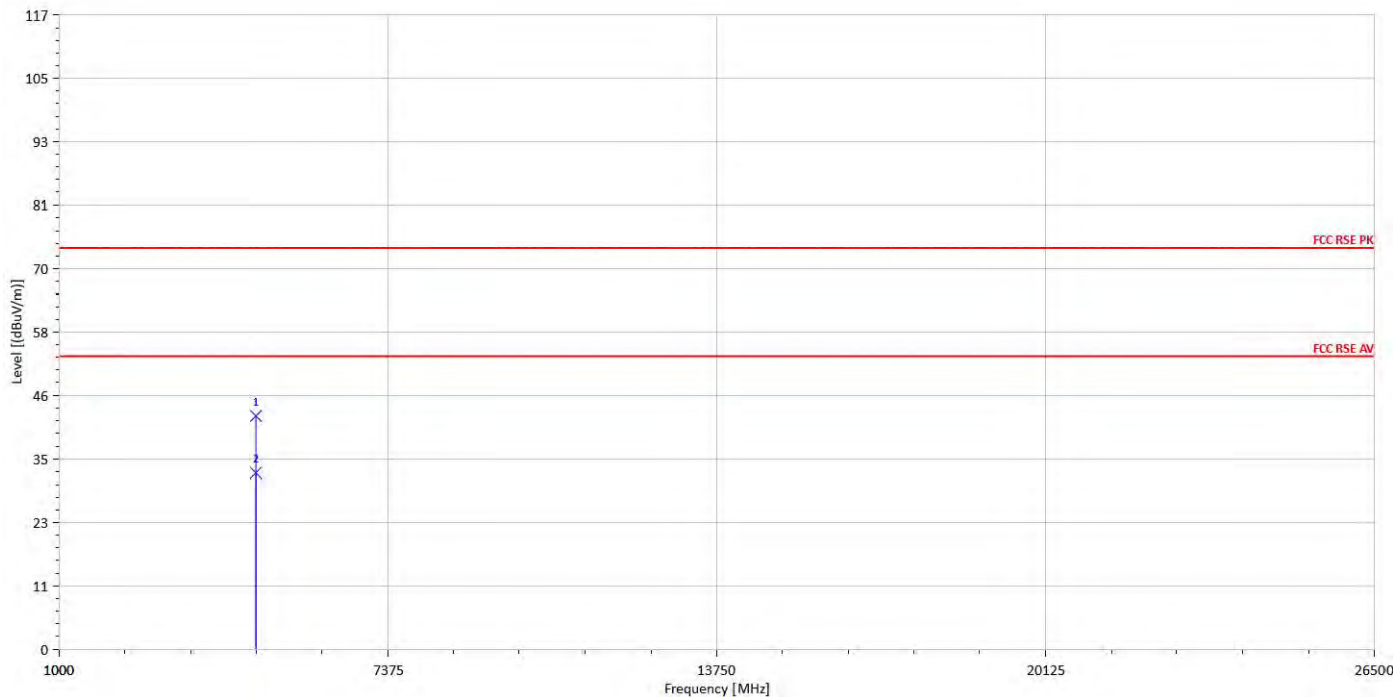
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11g      Test Date : 2016/6/14  
 Fundamental Frequency : 2412 MHz      Temp. / Humi. : 22.7deg\_C/57RH  
 Operation Band : Tx CH Low      Test Engineer : Pony  
 EUT Pol. : H      Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4824.00 | H       | Peak     | 35.50         | 7.58   | 43.08  | 74     | -30.92 |
| 4824.00 | H       | Average  | 24.92         | 7.58   | 32.50  | 54     | -21.50 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

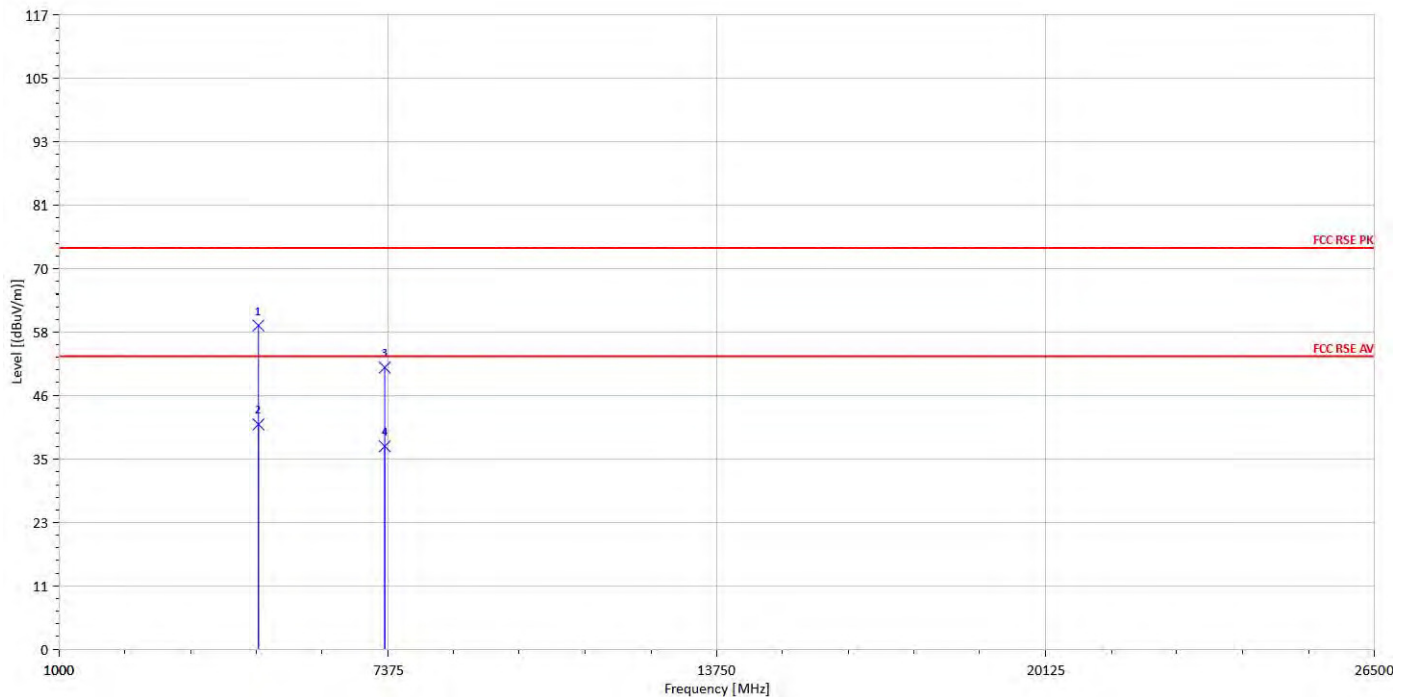
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11g      Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz      Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid      Test Engineer : Pony  
EUT Pol. : H      Measurement Antenna Pol. : Vertical



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 4874.00 | H       | Peak          | 51.83                  | 7.91   | 59.74     | 74        | -14.26 |
| 4874.00 | H       | Average       | 33.59                  | 7.91   | 41.50     | 54        | -12.50 |
| 7311.00 | H       | Peak          | 37.44                  | 14.47  | 51.91     | 74        | -22.09 |
| 7311.00 | H       | Average       | 22.95                  | 14.47  | 37.42     | 54        | -16.58 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

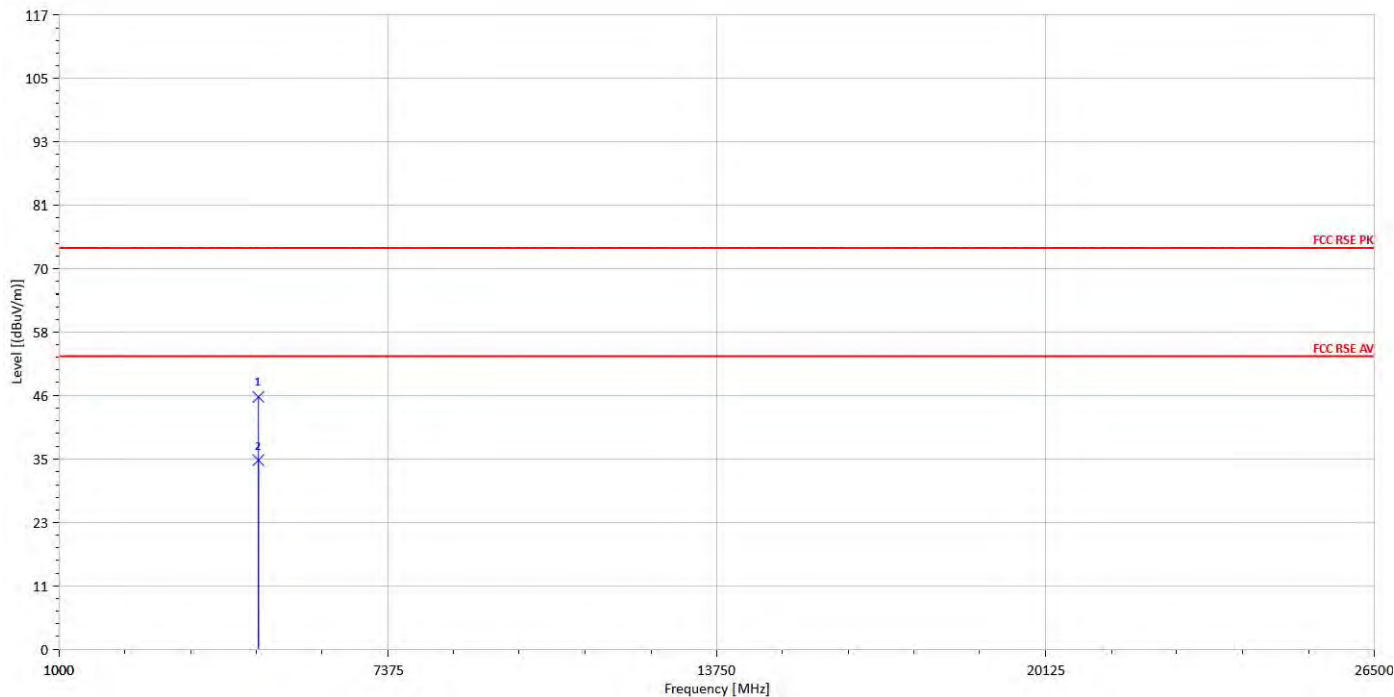
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g      Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz      Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid      Test Engineer : Pony  
EUT Pol. : H      Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4874.00 | H       | Peak     | 38.70         | 7.91   | 46.61  | 74     | -27.39 |
| 4874.00 | H       | Average  | 26.92         | 7.91   | 34.83  | 54     | -19.17 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

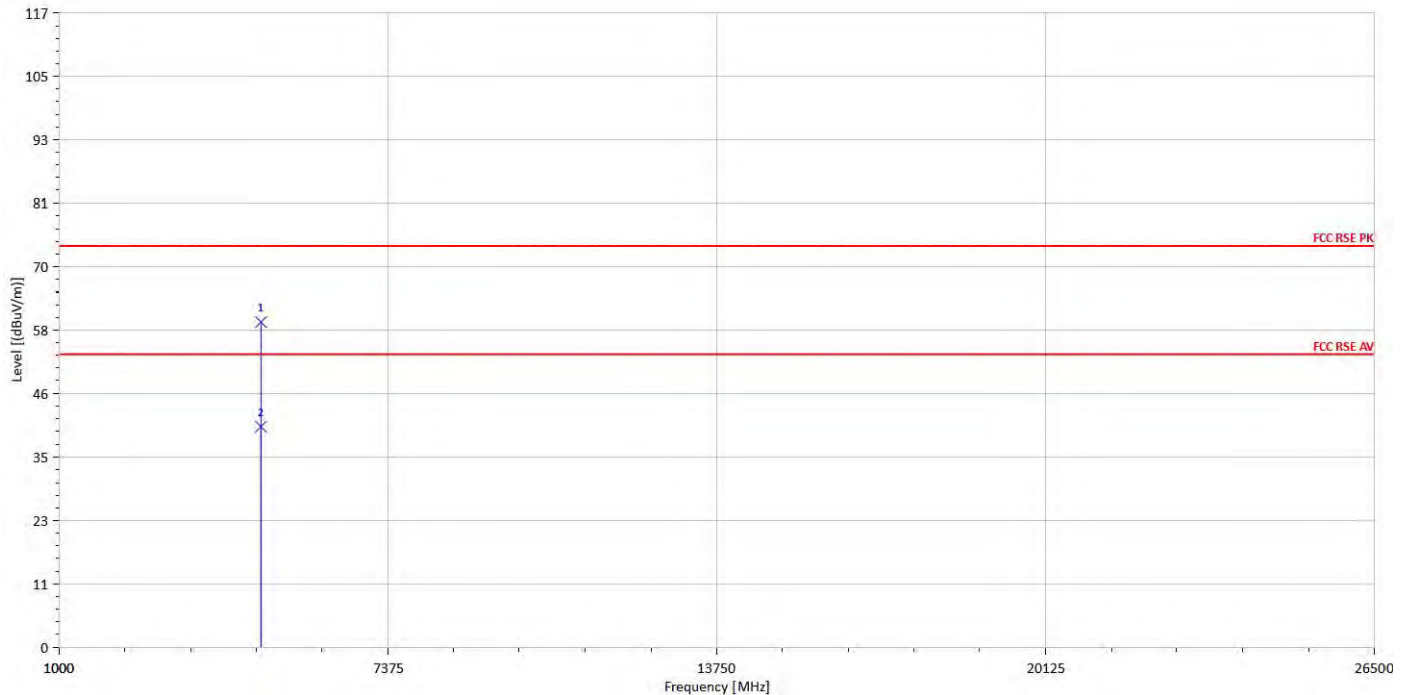
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/14  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4924.00 | H       | Peak     | 52.09         | 7.92   | 60.01  | 74     | -13.99 |
| 4924.00 | H       | Average  | 32.78         | 7.92   | 40.70  | 54     | -13.30 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

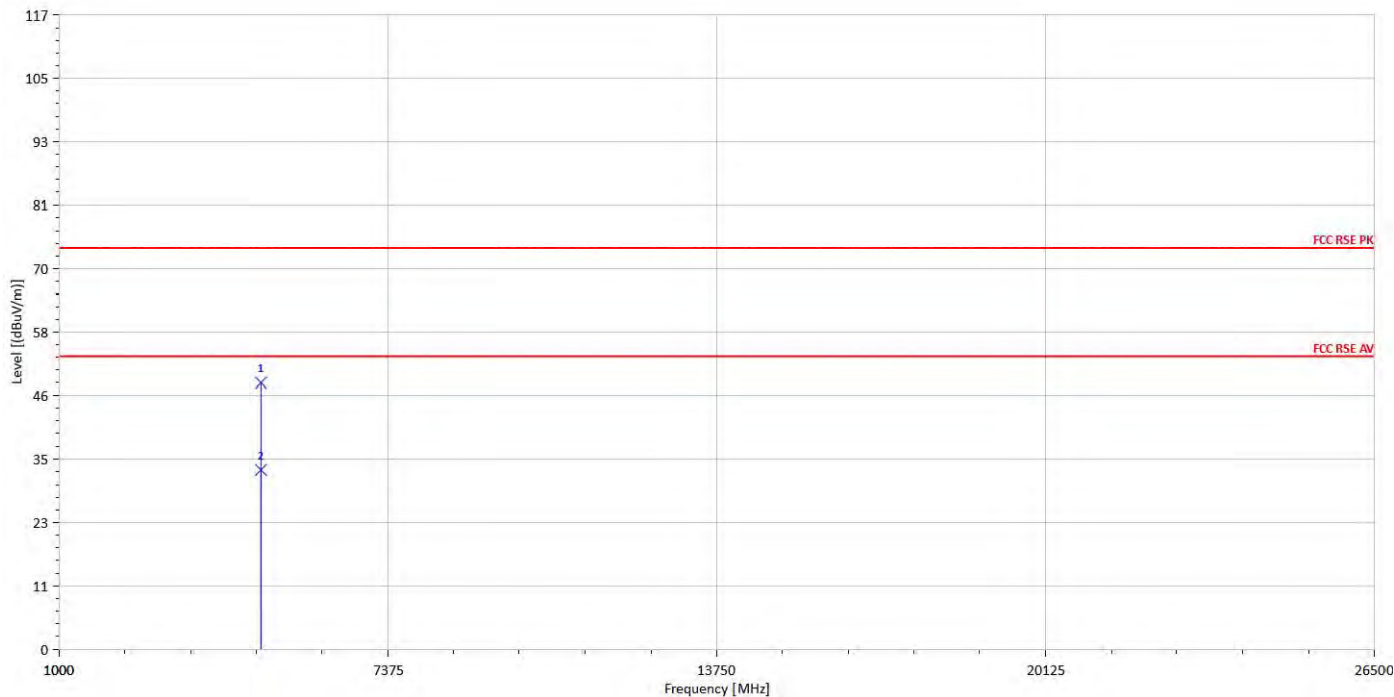
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11g Test Date : 2016/6/14  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4924.00 | H       | Peak     | 41.21         | 7.92   | 49.13  | 74     | -24.87 |
| 4924.00 | H       | Average  | 25.10         | 7.92   | 33.02  | 54     | -20.98 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

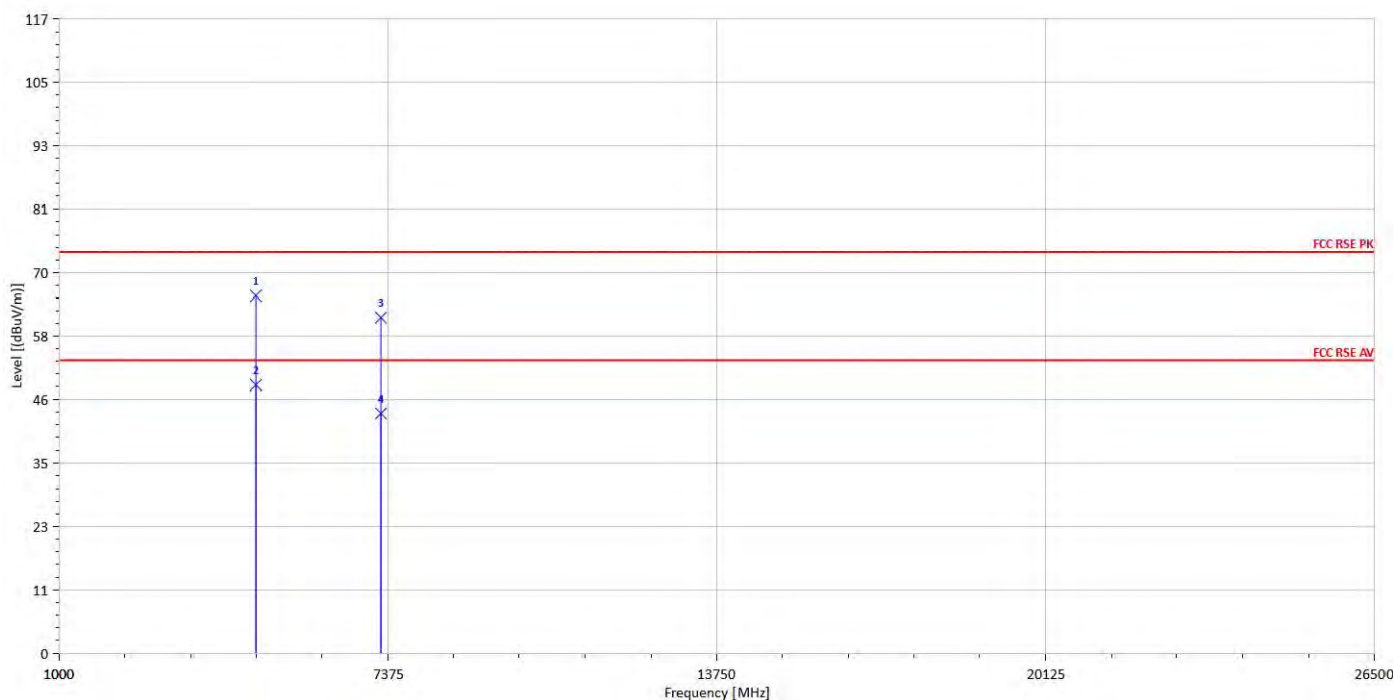
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Radiated Spurious Emission Measurement Result (802.11\_HT20)

Operation Mode : 802.11n20 Test Date : 2016/6/14  
Fundamental Frequency : 2412 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4824.00      | H               | Peak                         | 58.34                             | 7.58         | 65.92                  | 74                     | -8.08        |
| 4824.00      | H               | Average                      | 41.88                             | 7.58         | 49.46                  | 54                     | -4.54        |
| 7236.00      | H               | Peak                         | 47.39                             | 14.56        | 61.95                  | 74                     | -12.05       |
| 7236.00      | H               | Average                      | 29.73                             | 14.56        | 44.29                  | 54                     | -9.71        |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

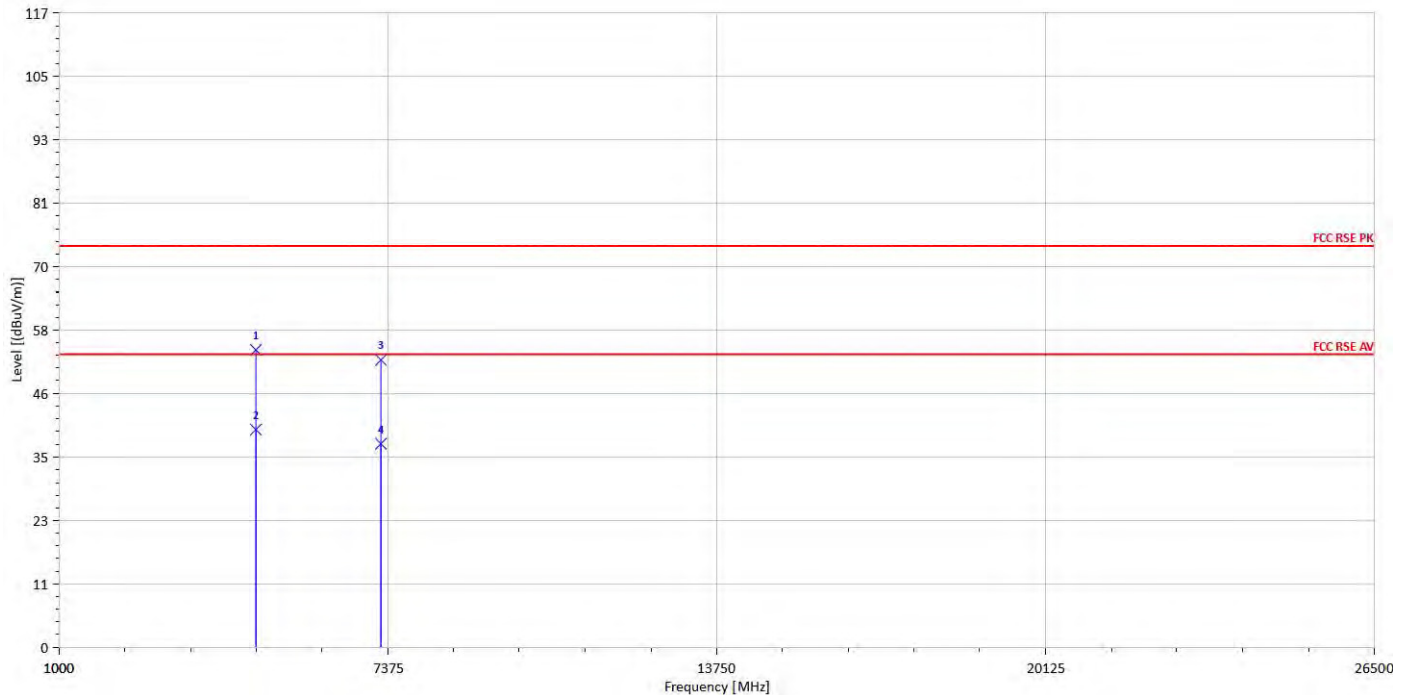
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11n20 Test Date : 2016/6/14  
Fundamental Frequency : 2412 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 4824.00 | H       | Peak          | 47.24                  | 7.58   | 54.82     | 74        | -19.18 |
| 4824.00 | H       | Average       | 32.59                  | 7.58   | 40.17     | 54        | -13.83 |
| 7236.00 | H       | Peak          | 38.39                  | 14.56  | 52.95     | 74        | -21.05 |
| 7236.00 | H       | Average       | 22.96                  | 14.56  | 37.52     | 54        | -16.48 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

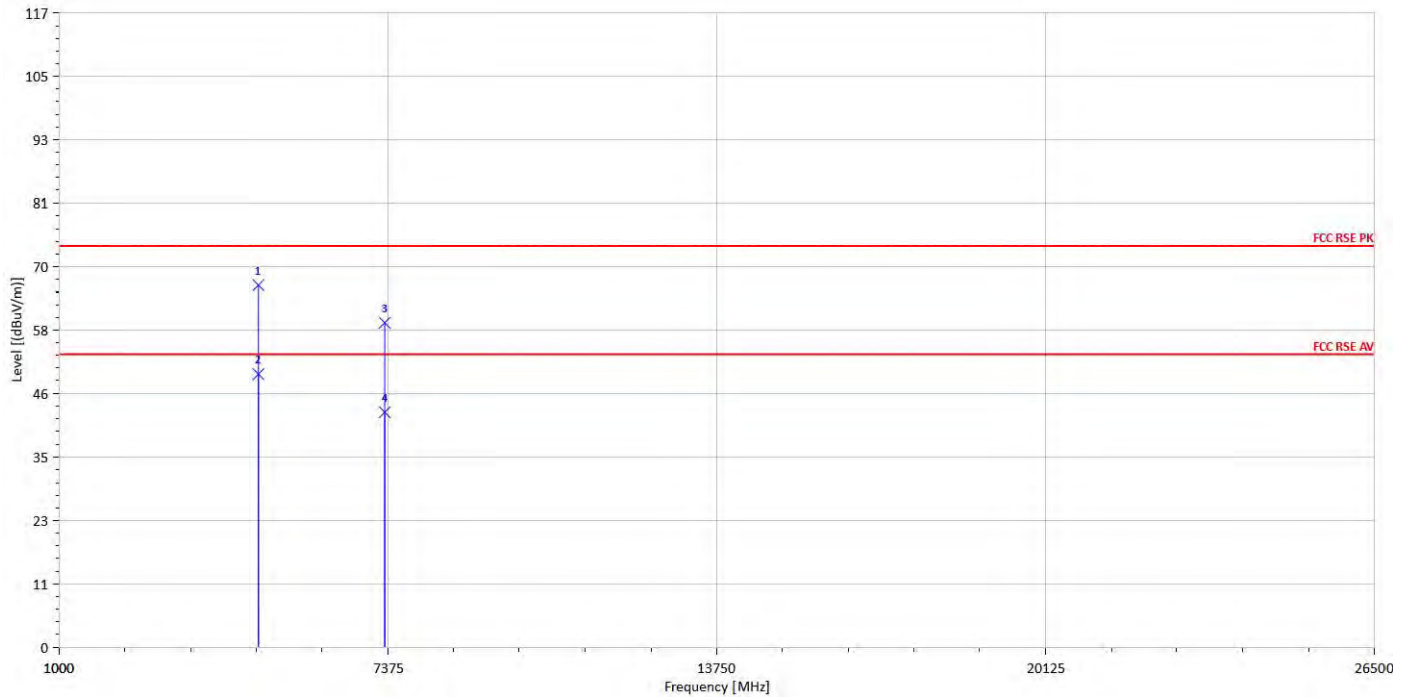
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n20 Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4874.00      | H               | Peak                         | 58.79                             | 7.91         | 66.70                  | 74                     | -7.30        |
| 4874.00      | H               | Average                      | 42.40                             | 7.91         | 50.31                  | 54                     | -3.69        |
| 7311.00      | H               | Peak                         | 45.40                             | 14.47        | 59.87                  | 74                     | -14.13       |
| 7311.00      | H               | Average                      | 28.91                             | 14.47        | 43.38                  | 54                     | -10.62       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

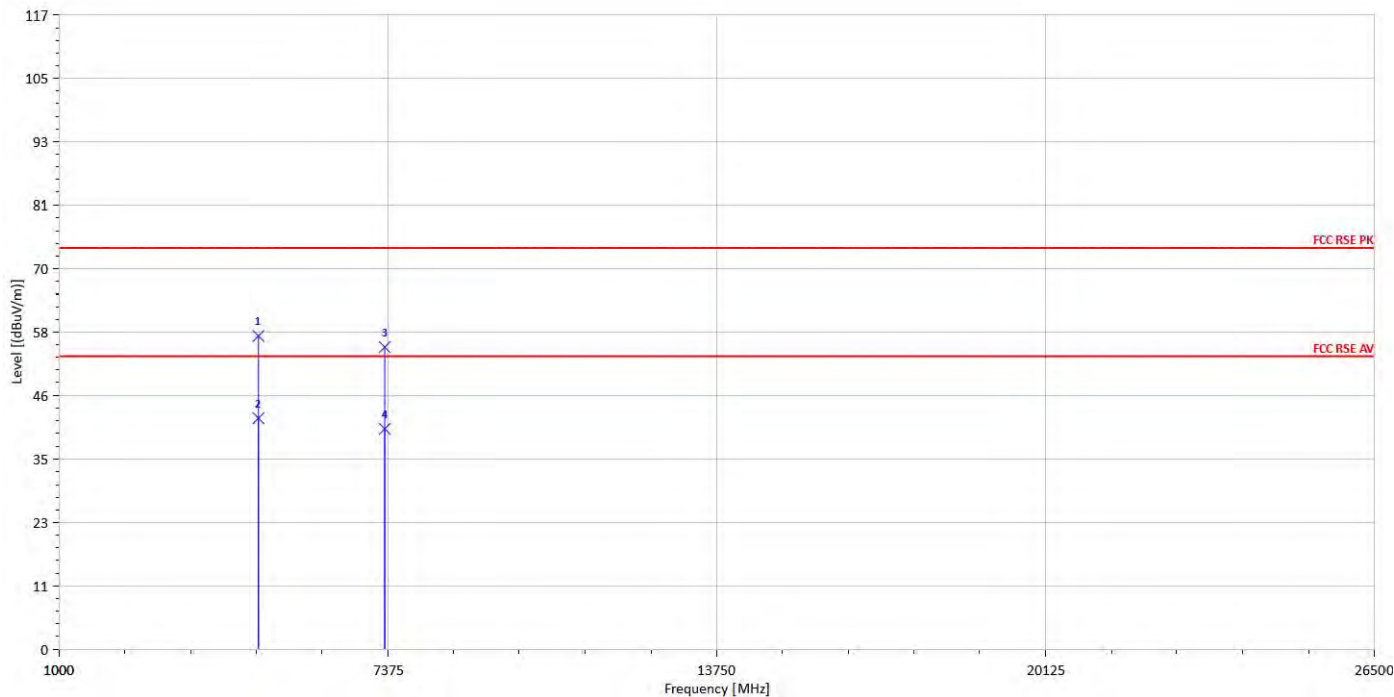
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11n20 Test Date : 2016/6/14  
 Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
 Operation Band : Tx CH Mid Test Engineer : Pony  
 EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4874.00      | H               | Peak                         | 49.88                             | 7.91         | 57.79                  | 74                     | -16.21       |
| 4874.00      | H               | Average                      | 34.75                             | 7.91         | 42.66                  | 54                     | -11.34       |
| 7311.00      | H               | Peak                         | 41.24                             | 14.47        | 55.71                  | 74                     | -18.29       |
| 7311.00      | H               | Average                      | 26.20                             | 14.47        | 40.67                  | 54                     | -13.33       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

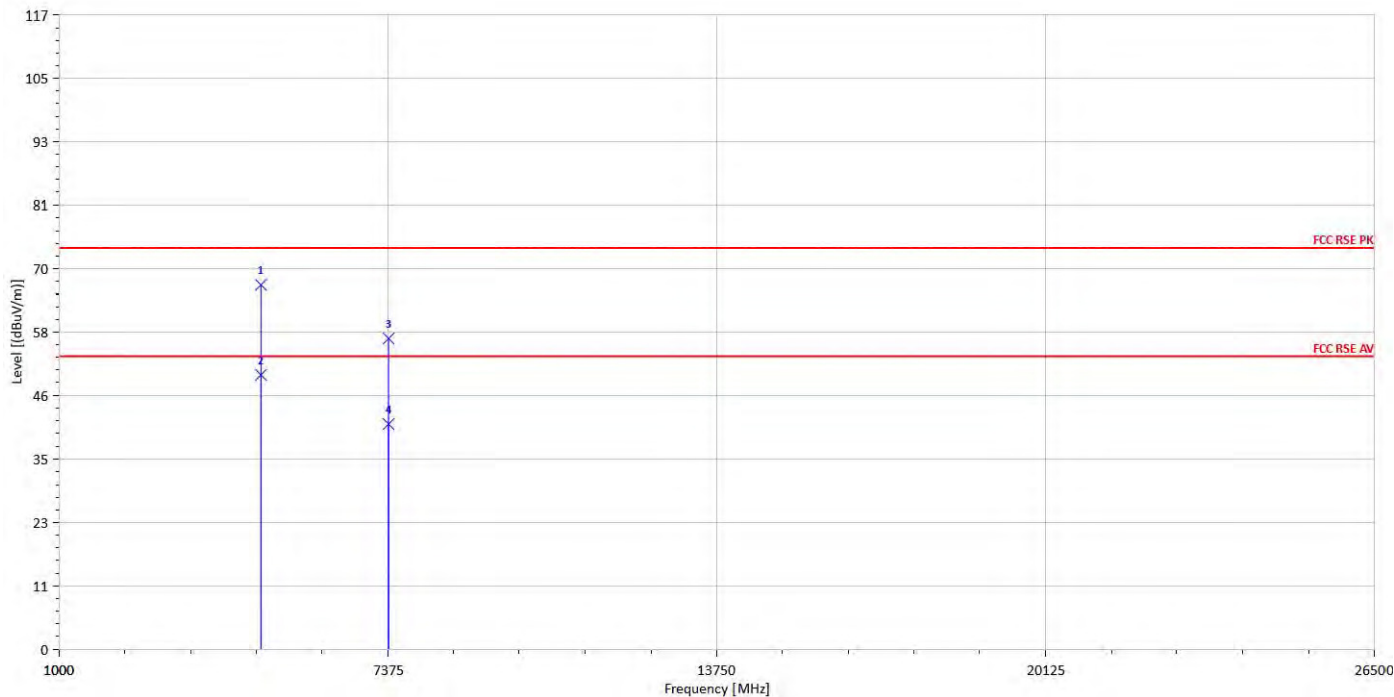
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n20 Test Date : 2016/6/14  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4924.00      | H               | Peak                         | 59.21                             | 7.92         | 67.13                  | 74                     | -6.87        |
| 4924.00      | H               | Average                      | 42.62                             | 7.92         | 50.54                  | 54                     | -3.46        |
| 7386.00      | H               | Peak                         | 42.33                             | 15.00        | 57.33                  | 74                     | -16.67       |
| 7386.00      | H               | Average                      | 26.56                             | 15.00        | 41.56                  | 54                     | -12.44       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

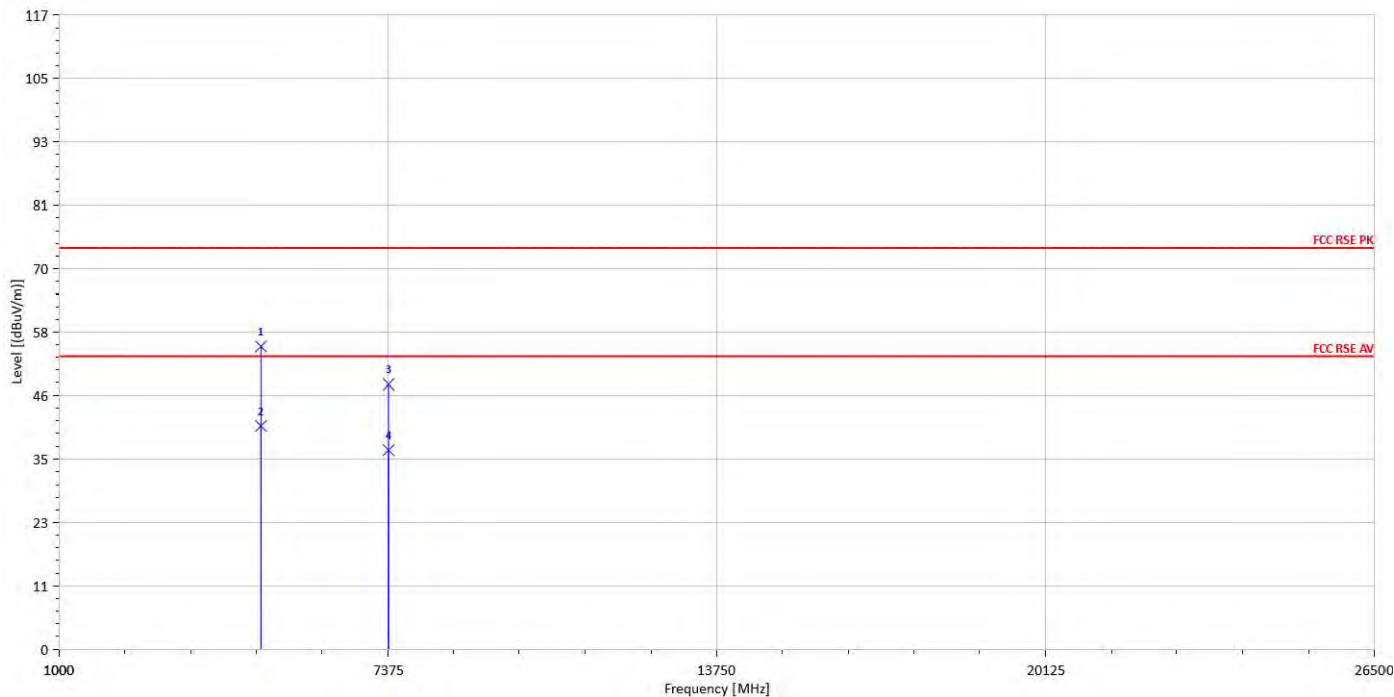
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n20 Test Date : 2016/6/14  
Fundamental Frequency : 2462 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4924.00      | H               | Peak                         | 47.92                             | 7.92         | 55.84                  | 74                     | -18.16       |
| 4924.00      | H               | Average                      | 33.29                             | 7.92         | 41.21                  | 54                     | -12.79       |
| 7386.00      | H               | Peak                         | 33.84                             | 15.00        | 48.84                  | 74                     | -25.16       |
| 7386.00      | H               | Average                      | 21.70                             | 15.00        | 36.70                  | 54                     | -17.30       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

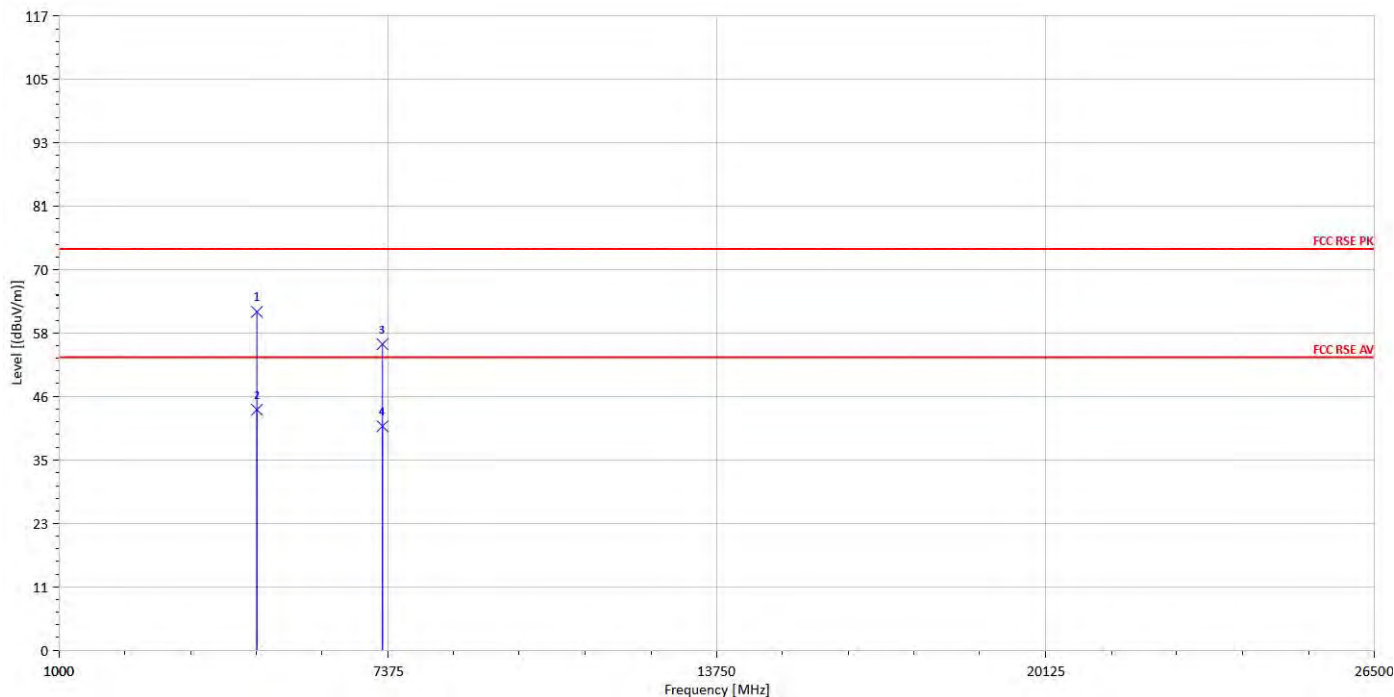
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## Radiated Spurious Emission Measurement Result (802.11\_HT40)

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11n40 | Test Date :                | 2016/6/14      |
| Fundamental Frequency : | 2422 MHz  | Temp. / Humi. :            | 22.7deg_C/57RH |
| Operation Band :        | Tx CH Low | Test Engineer :            | Pony           |
| EUT Pol. :              | H         | Measurement Antenna Pol. : | Vertical       |



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4844.00      | H               | Peak                         | 54.93                             | 7.55         | 62.48                  | 74                     | -11.52       |
| 4844.00      | H               | Average                      | 36.87                             | 7.55         | 44.42                  | 54                     | -9.58        |
| 7266.00      | H               | Peak                         | 41.26                             | 15.19        | 56.45                  | 74                     | -17.55       |
| 7266.00      | H               | Average                      | 26.16                             | 15.19        | 41.35                  | 54                     | -12.65       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

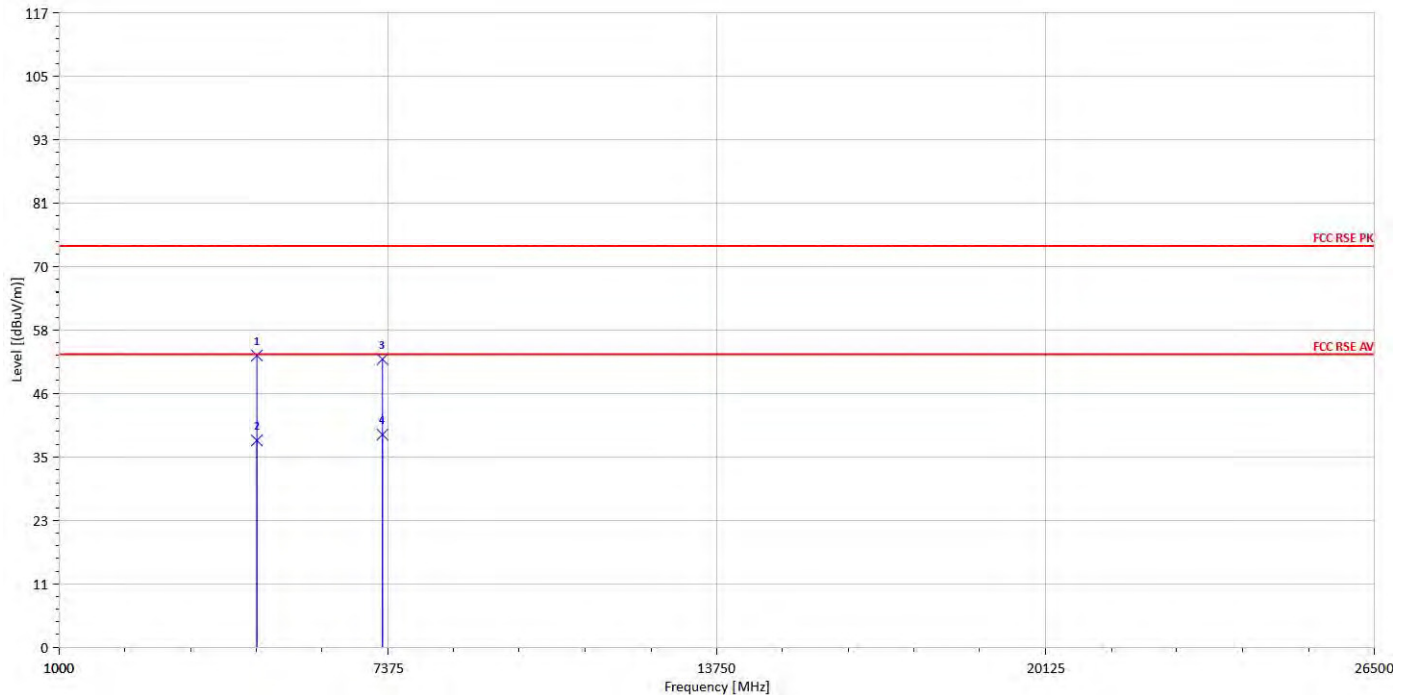
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11n40 Test Date : 2016/6/14  
Fundamental Frequency : 2422 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Low Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4844.00      | H               | Peak                         | 46.24                             | 7.55         | 53.79                  | 74                     | -20.21       |
| 4844.00      | H               | Average                      | 30.59                             | 7.55         | 38.14                  | 54                     | -15.86       |
| 7266.00      | H               | Peak                         | 37.91                             | 15.19        | 53.10                  | 74                     | -20.90       |
| 7266.00      | H               | Average                      | 24.04                             | 15.19        | 39.23                  | 54                     | -14.77       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

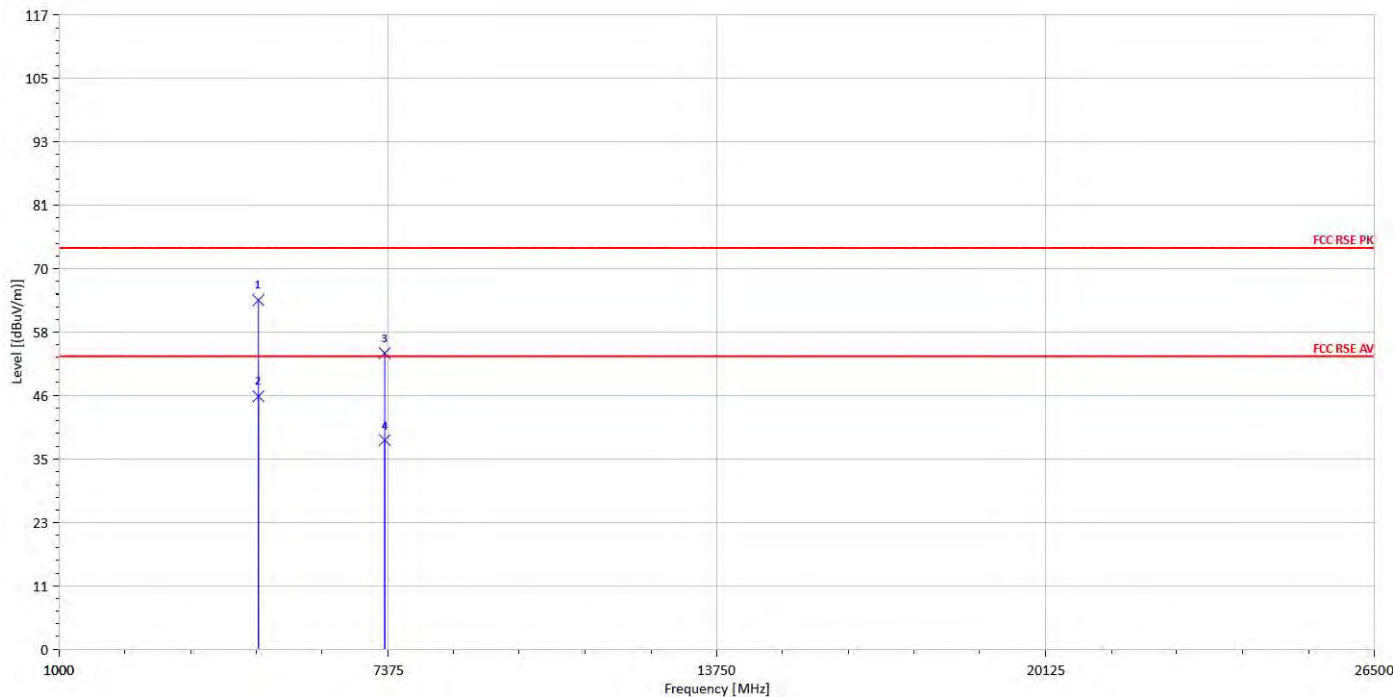
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n40 Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4874.00      | H               | Peak                         | 56.53                             | 7.91         | 64.44                  | 74                     | -9.56        |
| 4874.00      | H               | Average                      | 38.82                             | 7.91         | 46.73                  | 54                     | -7.27        |
| 7311.00      | H               | Peak                         | 40.13                             | 14.47        | 54.60                  | 74                     | -19.40       |
| 7311.00      | H               | Average                      | 24.10                             | 14.47        | 38.57                  | 54                     | -15.43       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

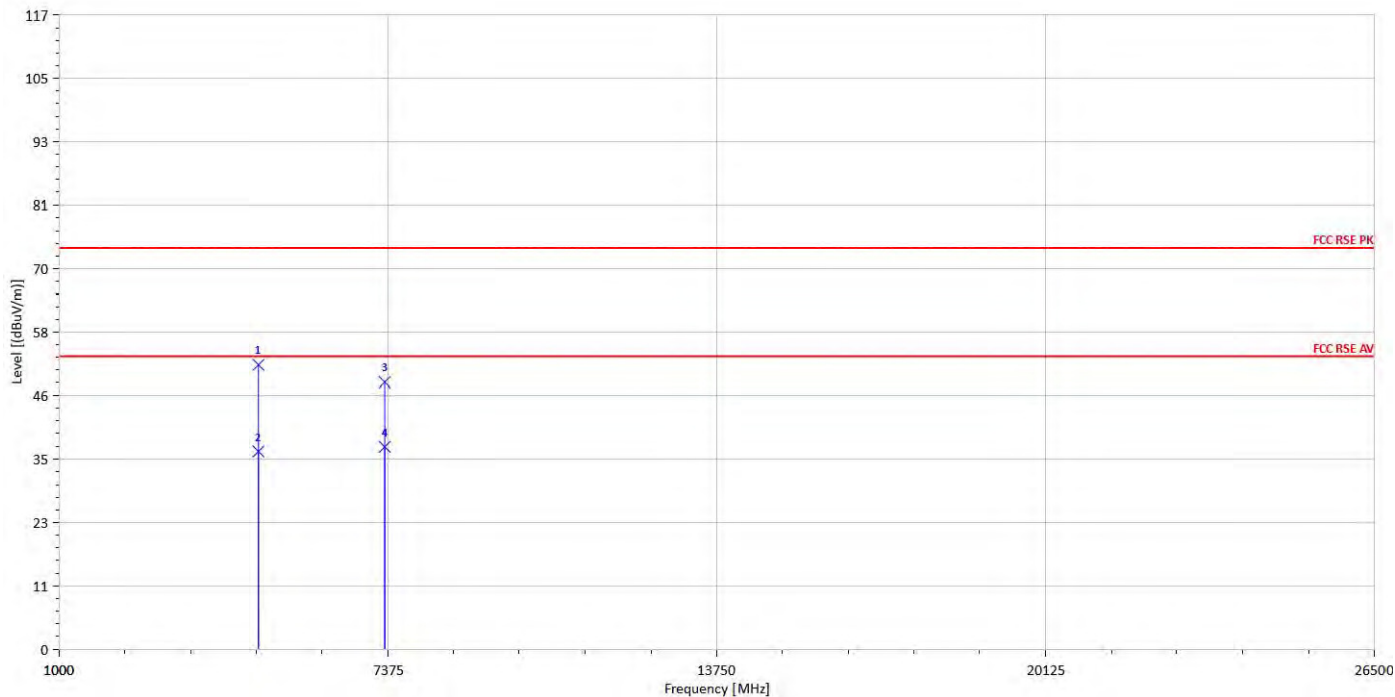
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Operation Mode : 802.11n40 Test Date : 2016/6/14  
Fundamental Frequency : 2437 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH Mid Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4874.00      | H               | Peak                         | 44.51                             | 7.91         | 52.42                  | 74                     | -21.58       |
| 4874.00      | H               | Average                      | 28.55                             | 7.91         | 36.46                  | 54                     | -17.54       |
| 7311.00      | H               | Peak                         | 34.76                             | 14.47        | 49.23                  | 74                     | -24.77       |
| 7311.00      | H               | Average                      | 22.84                             | 14.47        | 37.31                  | 54                     | -16.69       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

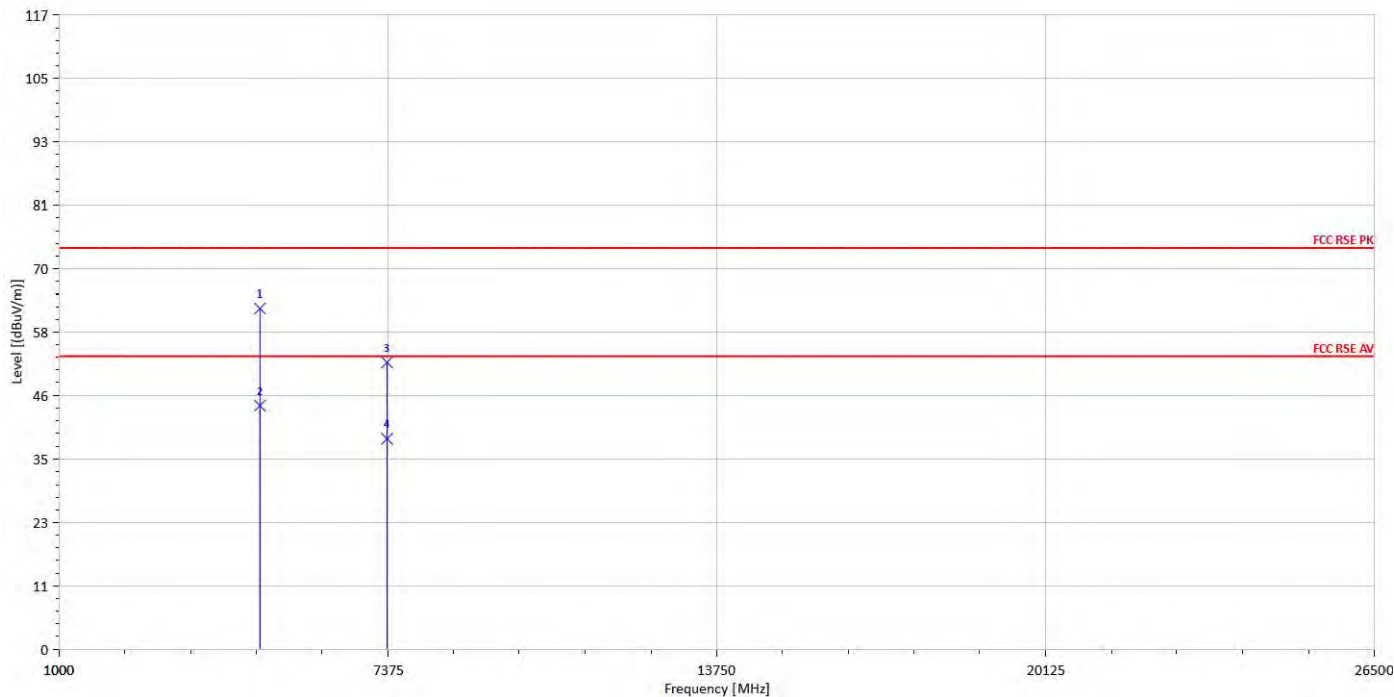
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n40 Test Date : 2016/6/14  
Fundamental Frequency : 2452 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4904.00      | H               | Peak                         | 55.47                             | 7.44         | 62.91                  | 74                     | -11.09       |
| 4904.00      | H               | Average                      | 37.56                             | 7.44         | 45.00                  | 54                     | -9.00        |
| 7356.00      | H               | Peak                         | 38.03                             | 14.85        | 52.88                  | 74                     | -21.12       |
| 7356.00      | H               | Average                      | 23.98                             | 14.85        | 38.83                  | 54                     | -15.17       |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

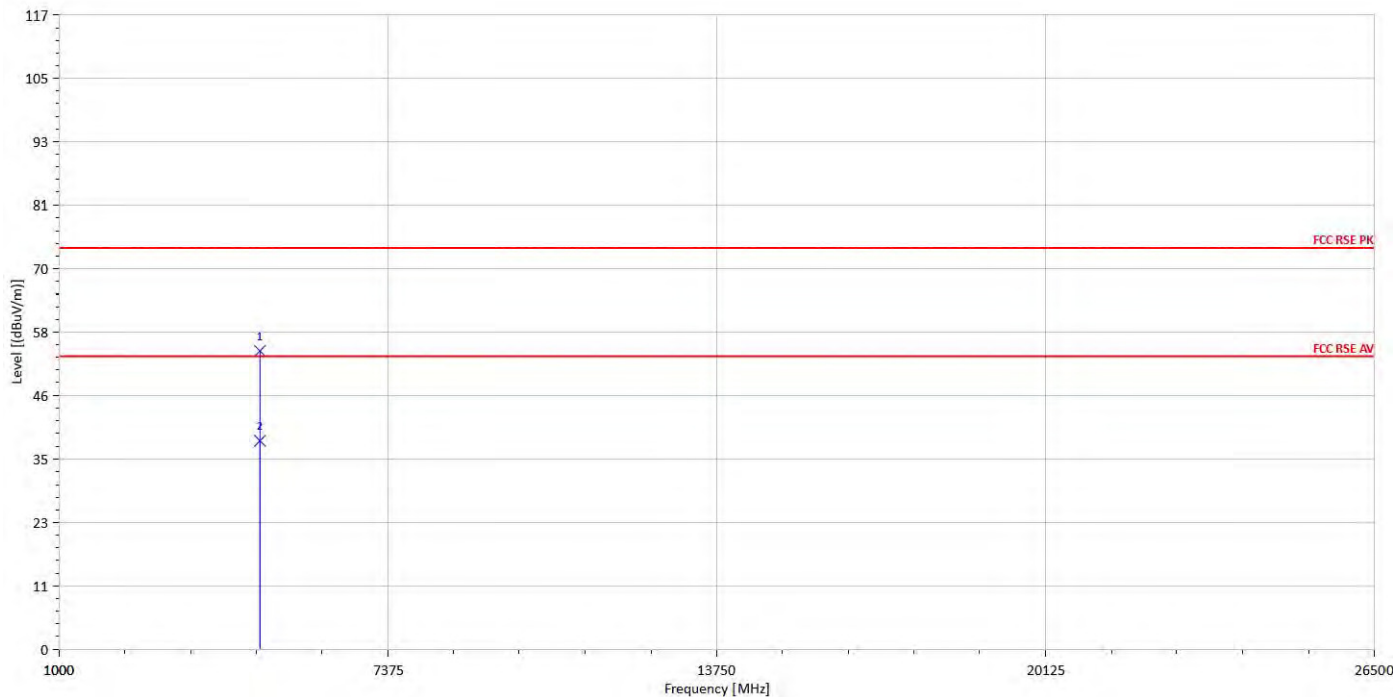
t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : 802.11n40 Test Date : 2016/6/14  
Fundamental Frequency : 2452 MHz Temp. / Humi. : 22.7deg\_C/57RH  
Operation Band : Tx CH High Test Engineer : Pony  
EUT Pol. : H Measurement Antenna Pol. : Horizontal



| Freq.   | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|         |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 4904.00 | H       | Peak     | 47.57         | 7.44   | 55.01  | 74     | -18.99 |
| 4904.00 | H       | Average  | 31.00         | 7.44   | 38.44  | 54     | -15.56 |

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 12 PEAK POWER SPECTRAL DENSITY

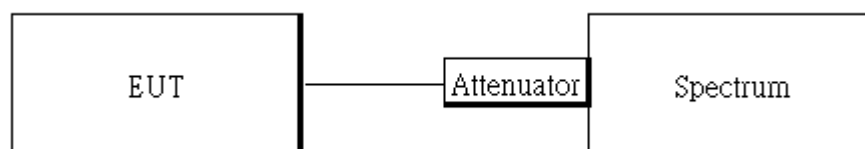
### 12.1 Standard Applicable

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

### 12.2 Measurement Equipment Used

| Conducted Emission Test Site |           |              |               |            |            |
|------------------------------|-----------|--------------|---------------|------------|------------|
| EQUIPMENT TYPE               | MFR       | MODEL NUMBER | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer            | KEYSIGHT  | N9010A       | MY54510568    | 04/14/2016 | 04/13/2017 |
| DC Block                     | PASTERNAK | PE8210       | RF29          | 12/12/2015 | 12/11/2016 |
| Attenuator                   | WOKEN     | 218FS-10     | RF23          | 12/12/2015 | 12/11/2016 |

### 12.3 Test Set-up



### 12.4 Measurement Procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance .
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the RBW = 3 kHz.
5. Set the VBW = 10 kHz.
6. Detector = peak.
7. Sweep time = auto couple.
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level.
11. 802.11n MIMO mode: offset is set following “measure and add 10 Log (N)” on spectrum to measure the PSD for MIMO mode. Offset = cable loss + 10 log (N), where N is number of transmitting antenna. N=2 for this given application.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

**Note:**

Antenna Gain: 3.91 dBi  
Number Antenna: 2 pcs  
Limit: 8 dBm

The antenna gain is grater than 6dBi in MIMO mode the limit reduce as belo  
Directional gain = gain of antenna element + 10 log (# of TX antenna element)  
Effective Legacy Gain (dBi) = 3.91+3.01=6.92dBi  
Limit: 8dBm – (6.92– 6dBi)=7.08dBm

## 12.5 Measurement Result

| POWER DENSITY 802.11b MODE |                        |                     |        |
|----------------------------|------------------------|---------------------|--------|
| Frequency (MHz)            | RF Power Density (dBm) | Maximum Limit (dBm) | Result |
| 2412                       | -17.99                 | 8.00                | PASS   |
| 2437                       | -21.13                 | 8.00                | PASS   |
| 2462                       | -19.03                 | 8.00                | PASS   |

| POWER DENSITY 802.11g MODE |                        |                     |        |
|----------------------------|------------------------|---------------------|--------|
| Frequency (MHz)            | RF Power Density (dBm) | Maximum Limit (dBm) | Result |
| 2412                       | -9.62                  | 8.00                | PASS   |
| 2437                       | -8.60                  | 8.00                | PASS   |
| 2462                       | -10.91                 | 8.00                | PASS   |

| POWER DENSITY 802.11n HT20 MODE |                        |                     |        |
|---------------------------------|------------------------|---------------------|--------|
| Frequency (MHz)                 | RF Power Density (dBm) | Maximum Limit (dBm) | Result |
| 2412                            | -9.08                  | 7.08                | PASS   |
| 2437                            | -8.70                  | 7.08                | PASS   |
| 2462                            | -9.70                  | 7.08                | PASS   |

| POWER DENSITY 802.11n HT40 MODE |                        |                     |        |
|---------------------------------|------------------------|---------------------|--------|
| Frequency (MHz)                 | RF Power Density (dBm) | Maximum Limit (dBm) | Result |
| 2422                            | -12.92                 | 7.08                | PASS   |
| 2437                            | -11.26                 | 7.08                | PASS   |
| 2452                            | -12.59                 | 7.08                | PASS   |

\*Refer to next page for plots

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

802.11b

## Power Spectral Density Test Plot (CH-Low)



## Power Spectral Density Test Plot (CH-Mid)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, WuKung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## Power Spectral Density Test Plot (CH-High)



802.11g

## Power Spectral Density Test Plot (CH-Low)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

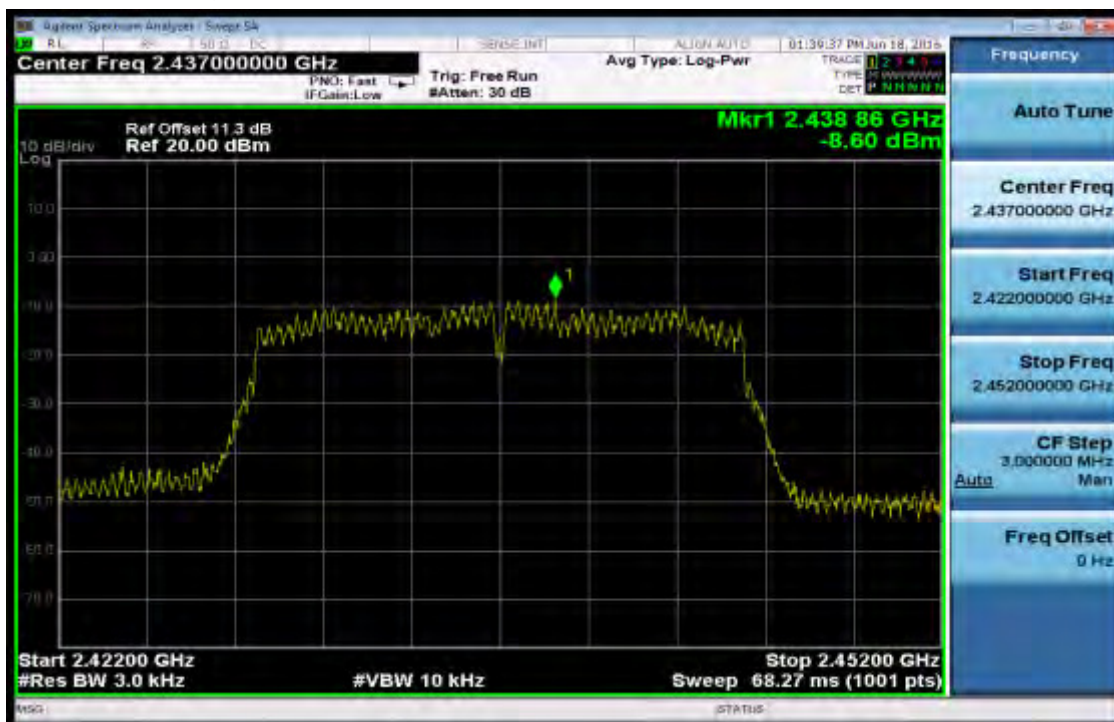
t (886-2) 2299-3279

f (886-2) 2298-0488

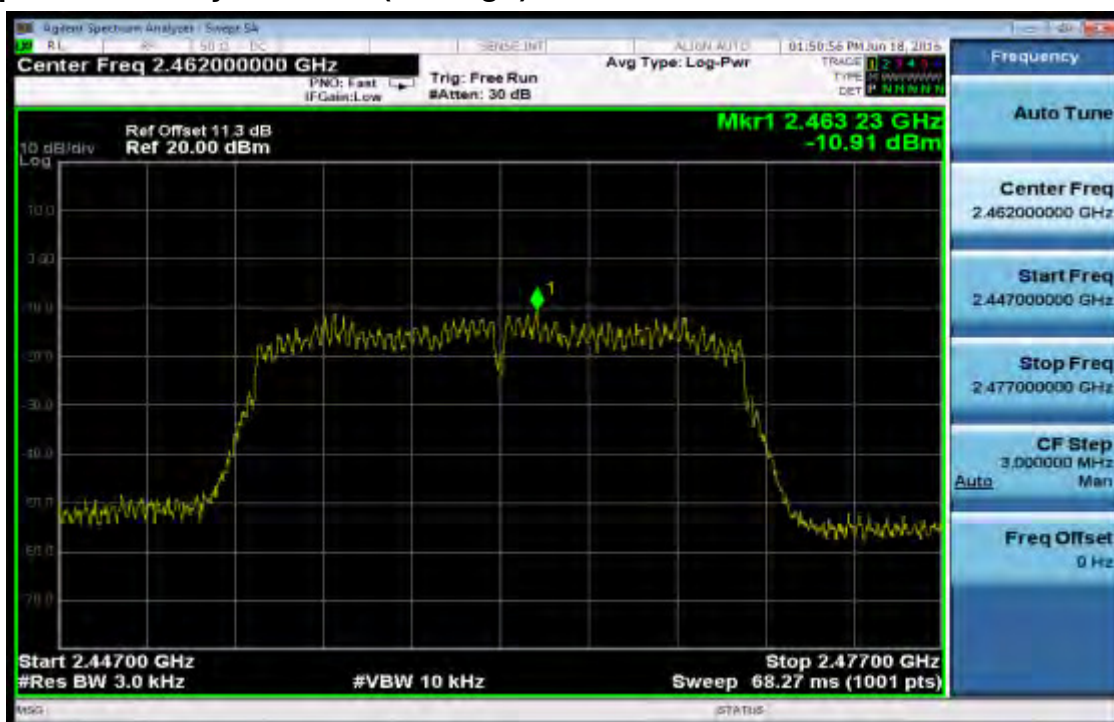
www.tw.sgs.com

Member of SGS Group

## Power Spectral Density Test Plot (CH-Mid)



## Power Spectral Density Test Plot (CH-High)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

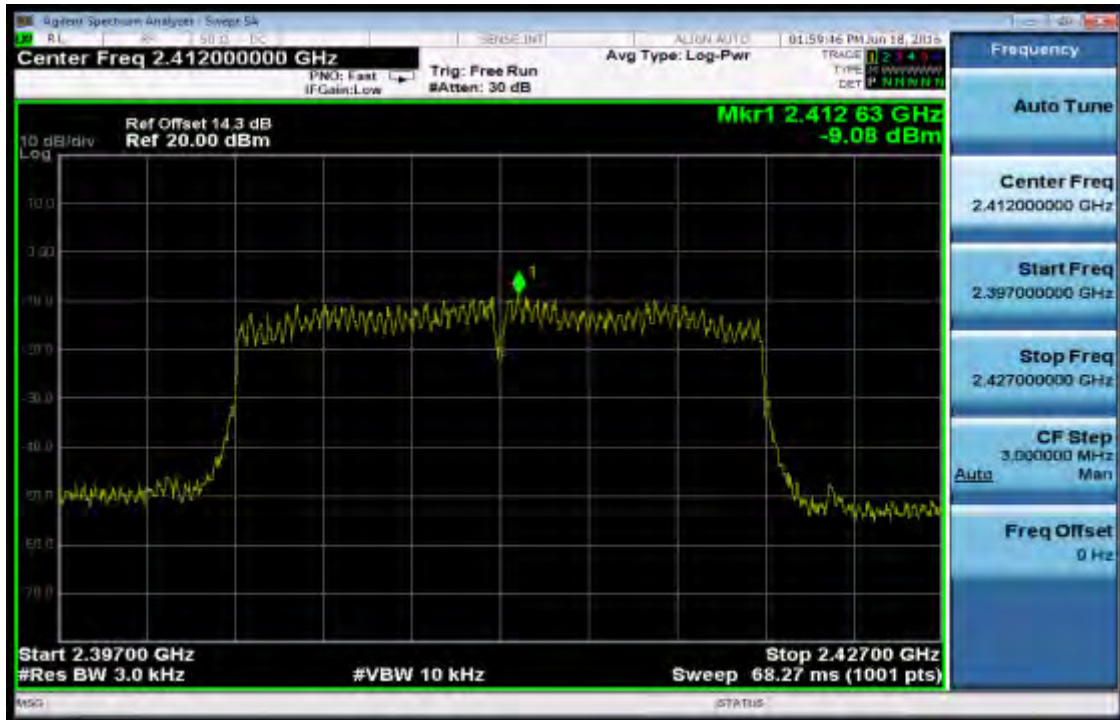
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

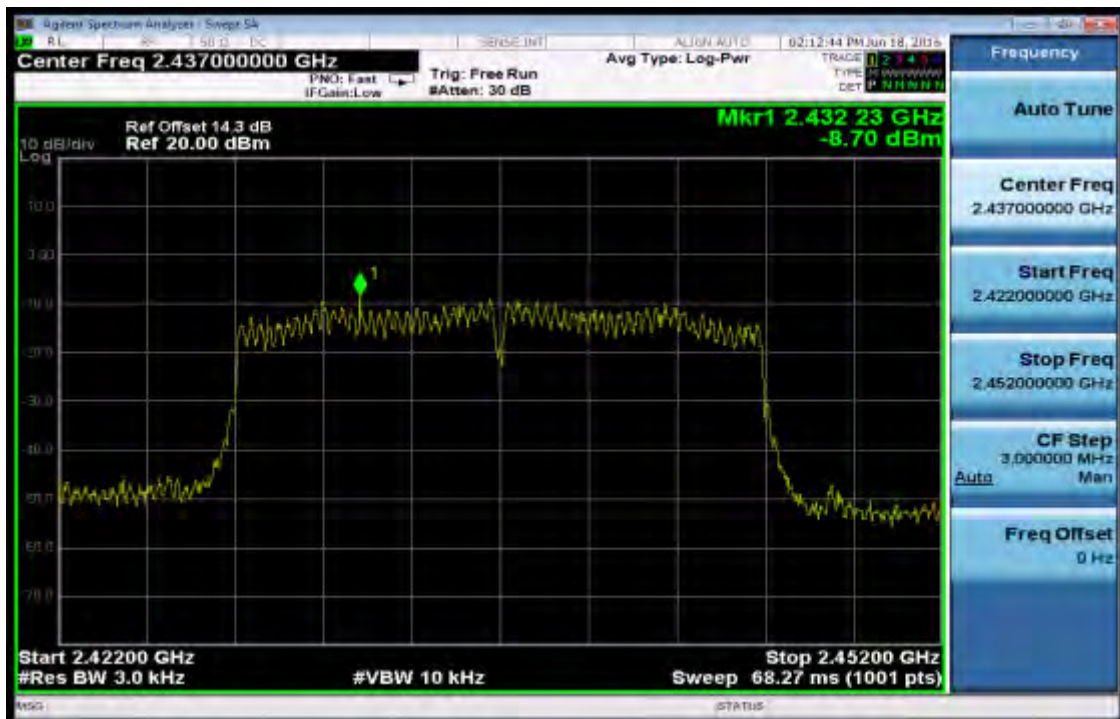
Member of SGS Group

## 802.11n\_HT20 (MIMO)

### Power Spectral Density Test Plot (CH-Low)



### Power Spectral Density Test Plot (CH-Mid)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No. 134, WuKung Road, New Taipei Industrial Park, WuKu District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

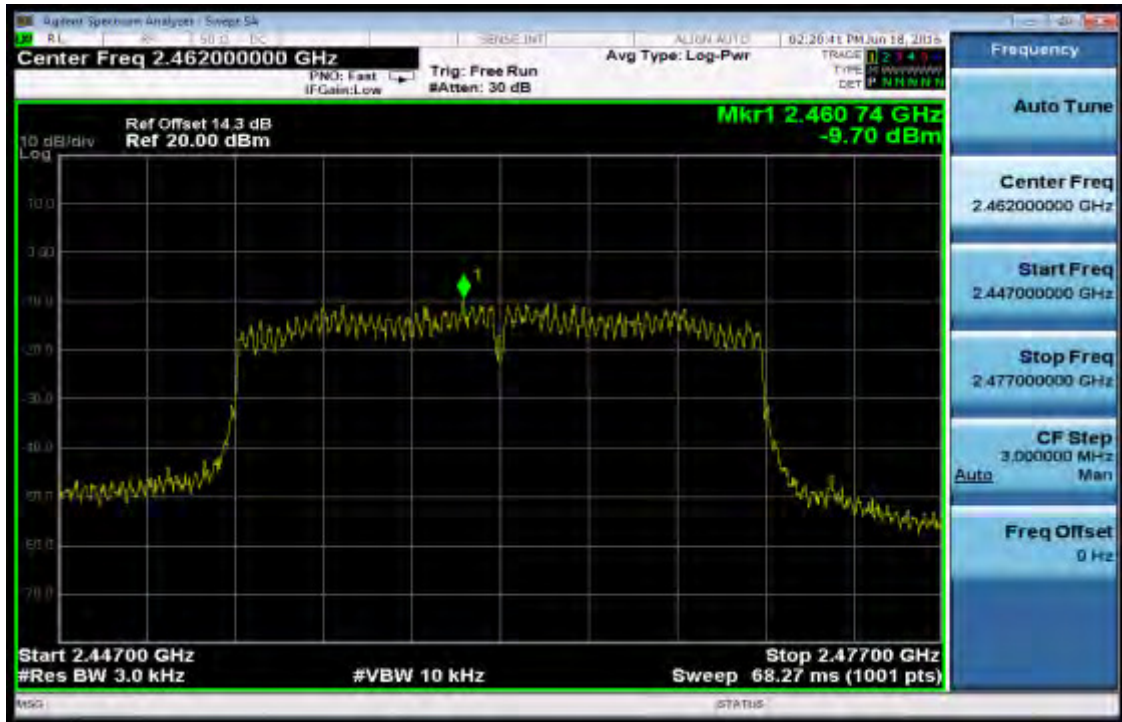
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

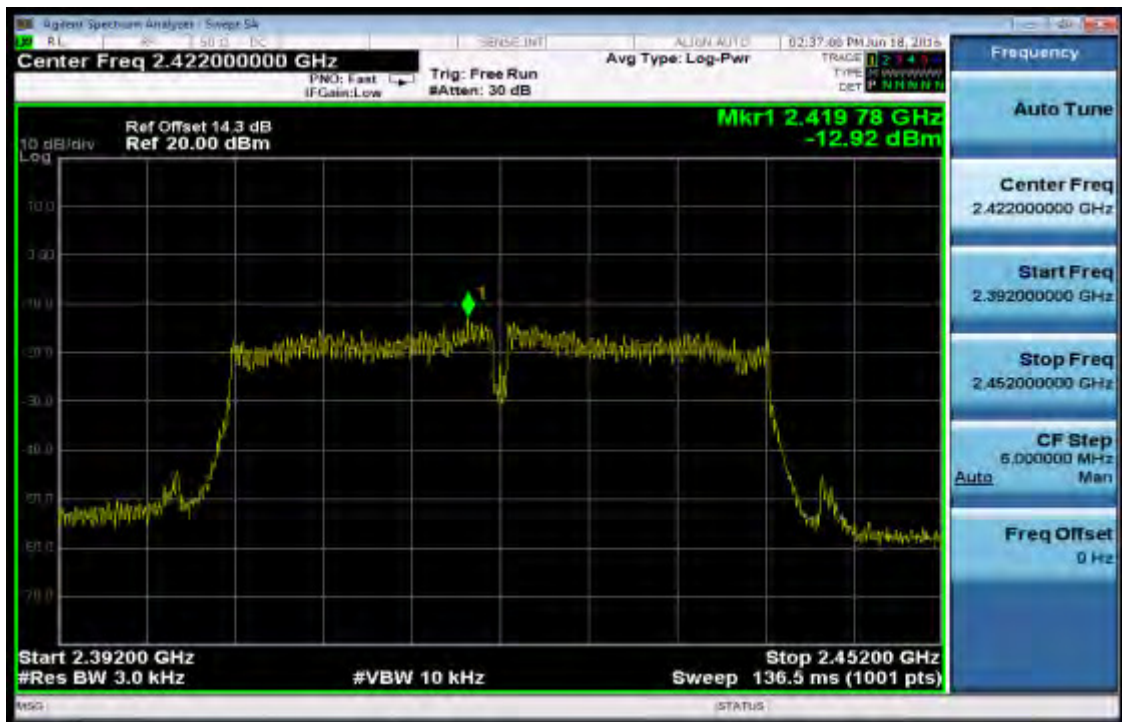
Member of SGS Group

## Power Spectral Density Test Plot (CH-High)



## 802.11n\_HT40 (MIMO)

## Power Spectral Density Test Plot (CH-Low)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## Power Spectral Density Test Plot (CH-Mid)



## Power Spectral Density Test Plot (CH-High)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

## 13 ANTENNA REQUIREMENT

### 13.1 Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

If the transmitting antenna is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

According to RSS-GEN 8.3

The applicant for equipment certification, as per RSP-100, must provide a list of all antenna types that may be used with the licence-exempt transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna.

Licence-exempt transmitters that have received equipment certification may operate with different types of antennas. However, it is not permissible to exceed the maximum equivalent isotropically radiated power (e.i.r.p.) limits specified in the applicable standard (RSS) for the licence-exempt apparatus.

Testing shall be performed using the highest gain antenna of each combination of licence-exempt transmitter and antenna type, with the transmitter output power set at the maximum level.<sup>9</sup> When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

### 13.2 Antenna Connected Construction

An embedded-in antenna design is used.

The antenna connector is designed with unique type RF connector and no consideration of replacement. Please see EUT photo and antenna spec. for details.

*~ End of Report ~*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group