# FCC Test Report

Product Name ： Wireless Ceiling Access Point

Model No. ： ACP24

FCC ID. ： 2ACBOACP24

Applicant ： ALCON Technology Corporation

Address ： 2nd floor,No.480-5, Sec 6, Yen-Ping N. Road, Shih-Lin, Taipei, Taiwan R.O.C.

Date of Receipt ： 2014/06/04

Issued Date ： 2014/08/15

Report No. ： 1460171R-RFUSP27V00

Report Version ： V1.0

# Test Report Certification

Issued Date : 2014/08/15
Report No. : 1460171R-RFUSP27V00

QuieTek

| | | |
|---|---|---|
| Product Name | : | Wireless Ceiling Access Point |
| Applicant | : | ALCON Technology Corporation |
| Address | : | 2nd floor,No.480-5, Sec 6, Yen-Ping N. Road, Shih-Lin, Taipei, Taiwan R.O.C. |
| Manufacturer | : | ALCON Technology Corporation |
| Model No. | : | ACP24 |
| FCC ID. | : | 2ACBOACP24 |
| EUT Test Voltage | : | DC 48~56V |
| Trade Name | : | ALCON |
| Applicable Standard | : | FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2013<br>ANSI C63.4: 2009 |
| Test Result | : | Complied |

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By :

( Demi Chang / Engineering Adm. Specialist )

Reviewed By :

( Bruno Tsai / Assistant Engineer)

Approved By :

( Roy Wang / Director )

**Laboratory Information**

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

| | | |
|---|---|---|
| **Taiwan R.O.C.** | **:** | **TAF, Accreditation Number: 1313**<br>**NCC, Certificate No : NCC-RCB-07** |
| **USA** | **:** | **FCC, Registration Number: 365520** |
| **Canada** | **:** | **IC, Submission No: 150981** |

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

**HsinChu Testing Laboratory:**
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

**LinKou Testing Laboratory:**
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

# TABLE OF CONTENTS

# 1. General Information

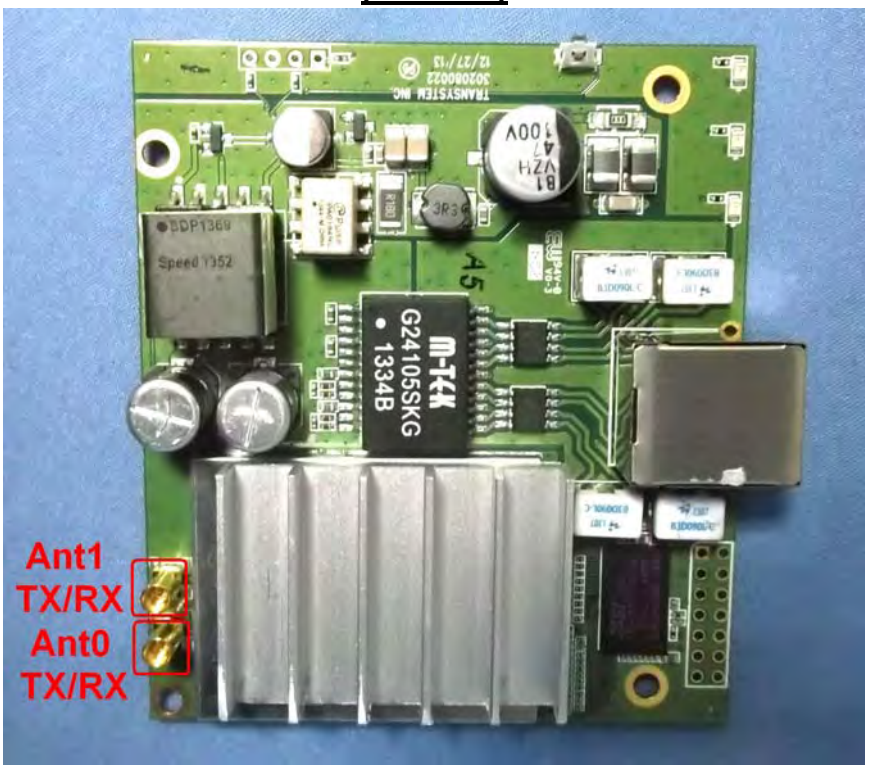
## 1.1. EUT Description

| | |
|---|---|
| Product Name | Wireless Ceiling Access Point |
| Product Type | WLAN (2TX, 2RX) |
| Trade Name | ALCON |
| Model No. | ACP24 |
| Frequency Range/Channel Number -IEEE 802.11b/g & IEEE 802.11n (20MHz) | 2412~2462MHz / 11 Channels |
| Frequency Range/Channel Number - IEEE 802.11n (40MHz) | 2422~2452MHz / 7 Channels |
| Type of Modulation (IEEE 802.11b) | Direct Sequence Spread Spectrum (DSSS) |
| Type of Modulation (IEEE 802.11g/n) | Orthogonal Frequency Division Multiplexing (OFDM) |
| Data Speed (IEEE 802.11b) | 1, 2, 5.5, 11Mbps |
| Data Speed (IEEE 802.11g) | 6, 9, 18, 24, 36, 48, 54Mbps |
| Data Speed (IEEE 802.11n) | Support a subset of the combination of GI, MCS 0~MCS 15 and bandwidth defined in 802.11n |
| Antenna Gain | 9dBi |
| Antenna Type | PCB Antenna |

**ANT-TX / RX & Bandwidth**

| ANT-TX / RX | TX | | RX | |
|---|---|---|---|---|
| Mode/ Channel Bandwidth | 20MHz | 40MHz | 20MHz | 40MHz |
| IEEE802.11b | ✓ | | ✓ | |
| IEEE802.11g | ✓ | | ✓ | |
| IEEE802.11n | ✓ | ✓ | ✓ | ✓ |

**(2TX /2RX)**



## IEEE 802.11n

| MCS Index | Modulation | R | $N_{BPSCS}$ | $N_{CBPS}$ | | $N_{DBPS}$ | | Data Rate(Mb/s) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 20MHz | 40MHz | 20MHz | 40MHz | 800ns GI | | 400ns GI | |
| | | | | | | | | 20MHz | 40MHz | 20MHz | 40MHz |
| 0 | BPSK | 1/2 | 1 | 52 | 108 | 26 | 54 | 6.5 | 13.5 | 7.2 | 15.0 |
| 1 | QPSK | 1/2 | 2 | 104 | 216 | 52 | 108 | 13.0 | 27.0 | 14.4 | 30.0 |
| 2 | QPSK | 3/4 | 2 | 104 | 216 | 78 | 162 | 19.5 | 40.5 | 21.7 | 45.0 |
| 3 | 16-QAM | 1/2 | 4 | 208 | 432 | 104 | 216 | 26.0 | 54.0 | 28.9 | 60.0 |
| 4 | 16-QAM | 3/4 | 4 | 208 | 432 | 156 | 324 | 39.0 | 81.0 | 43.3 | 90.0 |
| 5 | 64-QAM | 2/3 | 6 | 312 | 648 | 208 | 432 | 52.0 | 108.0 | 57.8 | 120.0 |
| 6 | 64-QAM | 3/4 | 6 | 312 | 648 | 234 | 486 | 58.5 | 121.5 | 65.0 | 135.0 |
| 7 | 64-QAM | 5/6 | 6 | 312 | 648 | 260 | 540 | 65.0 | 135.0 | 72.2 | 150.0 |
| Note 1: Support of 400ns GI is optional on transmit and receive. | | | | | | | | | | | |

Table 1 – MCS parameters for TX Antenna number = 1

| MCS Index | Modulation | R | $N_{BPSCS}$ | $N_{CBPS}$ | | $N_{DBPS}$ | | Data Rate(Mb/s) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 20MHz | 40MHz | 20MHz | 40MHz | 800ns GI | | 400ns GI | |
| | | | | | | | | 20MHz | 40MHz | 20MHz | 40MHz |
| 8 | BPSK | 1/2 | 1 | 104 | 216 | 52 | 108 | 13.0 | 27.0 | 14.4 | 30.0 |
| 9 | QPSK | 1/2 | 2 | 208 | 432 | 104 | 216 | 26.0 | 54.0 | 28.9 | 60.0 |
| 10 | QPSK | 3/4 | 2 | 208 | 432 | 156 | 324 | 39.0 | 81.0 | 43.3 | 90.0 |
| 11 | 16-QAM | 1/2 | 4 | 416 | 864 | 208 | 432 | 52.0 | 108.0 | 57.8 | 120.0 |
| 12 | 16-QAM | 3/4 | 4 | 416 | 864 | 312 | 648 | 78.0 | 162.0 | 86.7 | 180.0 |
| 13 | 64-QAM | 2/3 | 6 | 624 | 1296 | 416 | 864 | 104.0 | 216.0 | 115.6 | 240.0 |
| 14 | 64-QAM | 3/4 | 6 | 624 | 1296 | 468 | 972 | 117.0 | 243.0 | 130.0 | 270.0 |
| 15 | 64-QAM | 5/6 | 6 | 624 | 1296 | 520 | 1080 | 130.0 | 270.0 | 144.4 | 300.0 |
| Note 1: Support of 400ns GI is optional on transmit and receive. | | | | | | | | | | | |

Table 2 – MCS parameters for TX Antenna number = 2

| Symbol | Explanation |
|---|---|
| R | Code rate |
| $N_{BPSC}$ | Number of coded bits per single carrier |
| $N_{CBPS}$ | Number of coded bits per symbol |
| $N_{DBPS}$ | Number of data bits per symbol |
| GI | guard interval |

IEEE 802.11b/g & IEEE 802.11n (20MHz)

| Working Frequency of Each Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 001 | 2412 MHz | 002 | 2417 MHz | 003 | 2422 MHz | 004 | 2427 MHz |
| 005 | 2432 MHz | 006 | 2437 MHz | 007 | 2442 MHz | 008 | 2447 MHz |
| 009 | 2452 MHz | 010 | 2457 MHz | 011 | 2462 MHz | | |
| | | | | | | | |

IEEE 802.11n (40MHz)

| Working Frequency of Each Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 003 | 2422 MHz | 004 | 2427 MHz | 005 | 2432 MHz | 006 | 2437 MHz |
| 007 | 2442 MHz | 008 | 2447 MHz | 009 | 2452 MHz | | |
| | | | | | | | |

Note:

1. This device is a Wireless Ceiling Access Point including 2.4GHz b/g/n (2x2) transmitting and receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 1460171R-RFUSP01V00 under Declaration of Conformity.

## 1.2. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

| TX | Mode 1: Transmit |
|---|---|

| Test Items | Mode | Modulation | Channel | Antenna | Result |
|---|---|---|---|---|---|
| Conducted Emission | 1 | 11n(40MHz) | 6 | 0+1 | Complies |
| Peak Power Output | 1 | b/g | 1/ 6/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 6/ 11 | 0+1 | Complies |
| | 1 | 11n(40MHz) | 3/ 6/ 9 | 0+1 | Complies |
| Radiated Emission | 1 | b/g | 1/ 6/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 6/ 11 | 0+1 | Complies |
| | 1 | 11n(40MHz) | 3/ 6/ 9 | 0+1 | Complies |
| RF antenna conducted test | 1 | b/g | 1/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 11 | 0/1 | Complies |
| | 1 | 11n(40MHz) | 3/ 9 | 0/1 | Complies |
| Radiated Emission Band Edge | 1 | b/g | 1/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 11 | 0+1 | Complies |
| | 1 | 11n(40MHz) | 3/ 9 | 0+1 | Complies |
| Occupied Bandwidth | 1 | b/g | 1/ 6/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 6/ 11 | 0/1 | Complies |
| | 1 | 11n(40MHz) | 3/ 6/ 9 | 0/1 | Complies |
| Power Density | 1 | b/g | 1/ 6/ 11 | 0 | Complies |
| | 1 | 11n(20MHz) | 1/ 6/ 11 | 0+1 | Complies |
| | 1 | 11n(40MHz) | 3/ 6/ 9 | 0+1 | Complies |

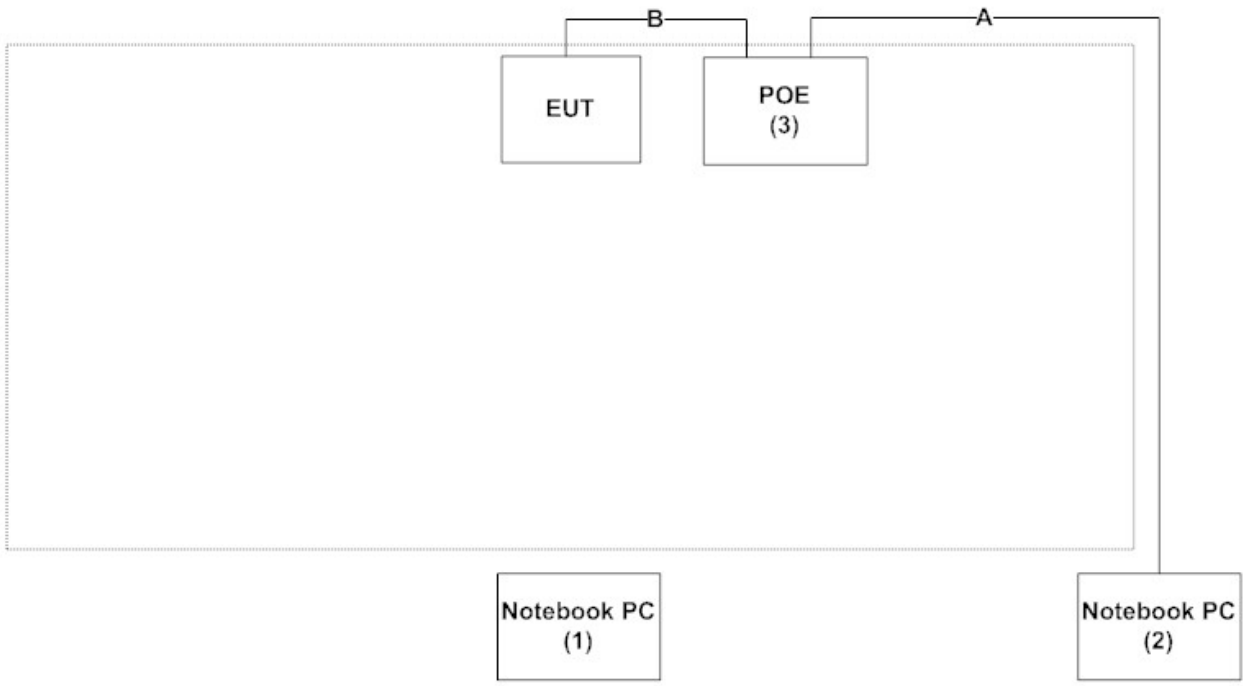
## 1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Product | | Manufacturer | Model No. | Serial No. | FCC ID | Power Cord |
|---|---|---|---|---|---|---|
| 1 | Notebook PC | HP | HSTNN-146C | CNU8253S1X | DoC | Non-Shielded, 1.8m |
| 2 | Notebook PC | ACER | MS2296 | LUSCV0213911 50332C2000 | DoC | Non-Shielded, 2.5m one ferrite core bonded |
| 3 | POE | POE Power Supply Gigabit | PSE-560055G | -- | DoC | -- |

## 1.4. Configuration of tested System

EMI Connection Diagram




| Signal Cable Type | | Signal cable Description |
|---|---|---|
| A | LAN Cable | Non-Shielded, 10m |
| B | LAN Cable | Non-Shielded, 3m |

## 1.5. EUT Exercise Software

| | |
|---|---|
| 1 | Test system is in accord with EUT user manual (refer to 1.4 configuration of tested system) |
| 2 | Turn on the power of all equipment. |
| 3 | Boot the PC from Hard Disk. |
| 4 | Data will communicate by connecting wireless function to PC. |
| 5 | The PC ‘s monitor will show the transmitting and receiving characteristics when the communication is success. |
| 6 | Repeat the above procedure (4) to (5). |

## 1.6. Test Facility

Ambient conditions in the laboratory:

| Items | Test Item | Required (IEC 68-1) | Actual |
|---|---|---|---|
| Temperature (°C) | FCC PART 15 C 15.207 Conducted Emission | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 Peak Power Output | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 Radiated Emission | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 RF antenna conducted test | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 Band Edge | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 Occupied Bandwidth | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.247 Power Density | 15 - 35 | 20 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |

# 2. Conducted Emission

## 2.1. Test Equipment

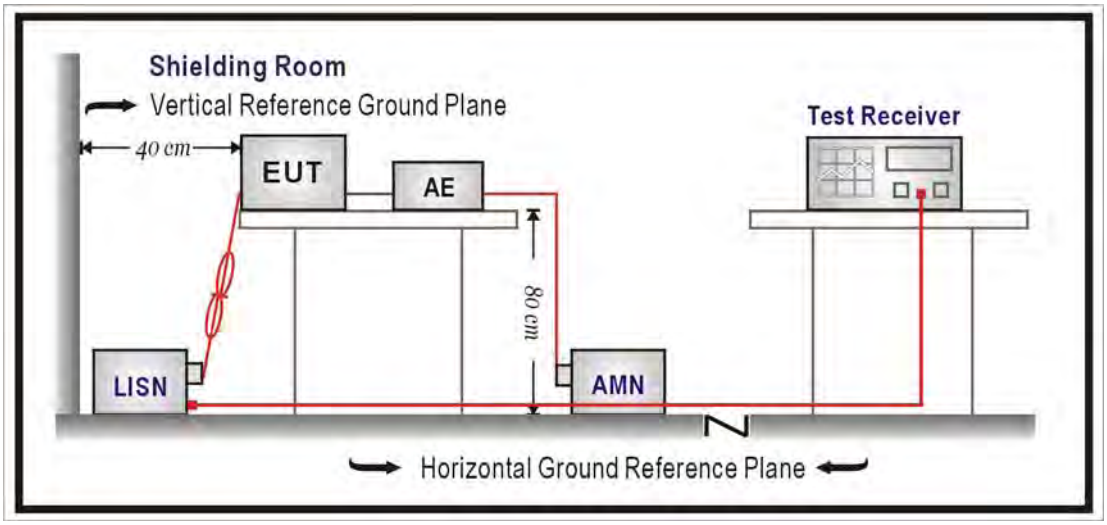
The following test equipments are used during the test:

Conducted Emission / SR3

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| LISN | R&S | ENV216 | 100096 | 2015/08/10 |
| LISN | R&S | ESH3-Z5 | 836679/022 | 2015/01/02 |
| Test Receiver | R&S | ESCS 30 | 825442/017 | 2014/12/24 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 2.2. Test Setup



## 2.3. Limits

| FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV) | | |
|---|---|---|
| Frequency MHz | QP | AV |
| 0.15 - 0.50 | 66-56 | 56-46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30 | 60 | 50 |

Remarks: In the above table, the tighter limit applies at the band edges.

## 2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

## 2.5. Test Specification

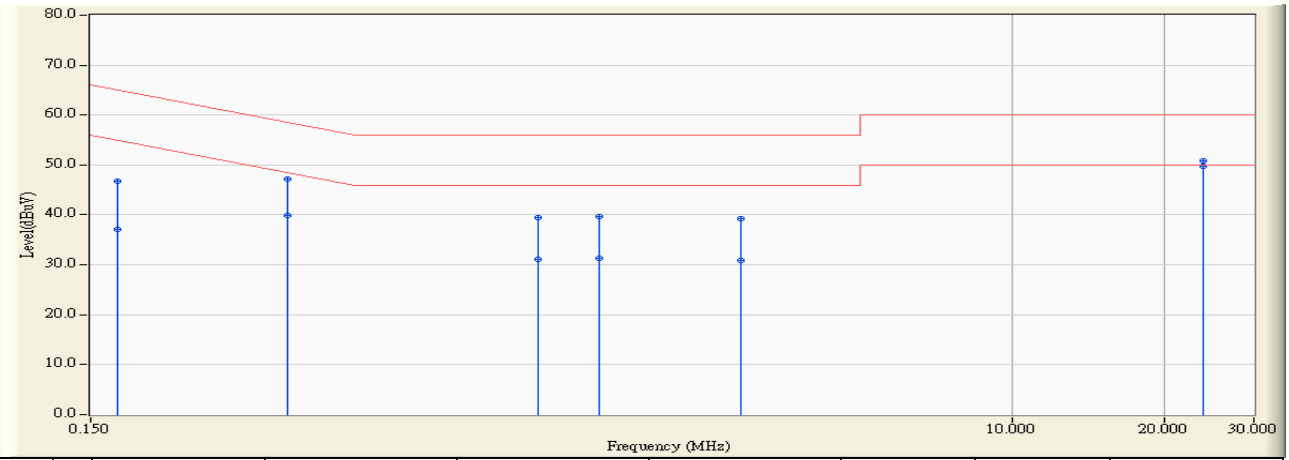
According to FCC Part 15 Subpart C Paragraph 15.207: 2013

## 2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

## 2.7. Test Result

| | |
|---|---|
| **Site : SR2** | **Time : 2014/08/08 - 14:12** |
| **Limit : CISPR_B_00M_QP** | **Margin : 10** |
| **Probe : SR2_LISN(16A)-3_0822 - Line1** | **Power : AC 120V 60Hz** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 ch6** |

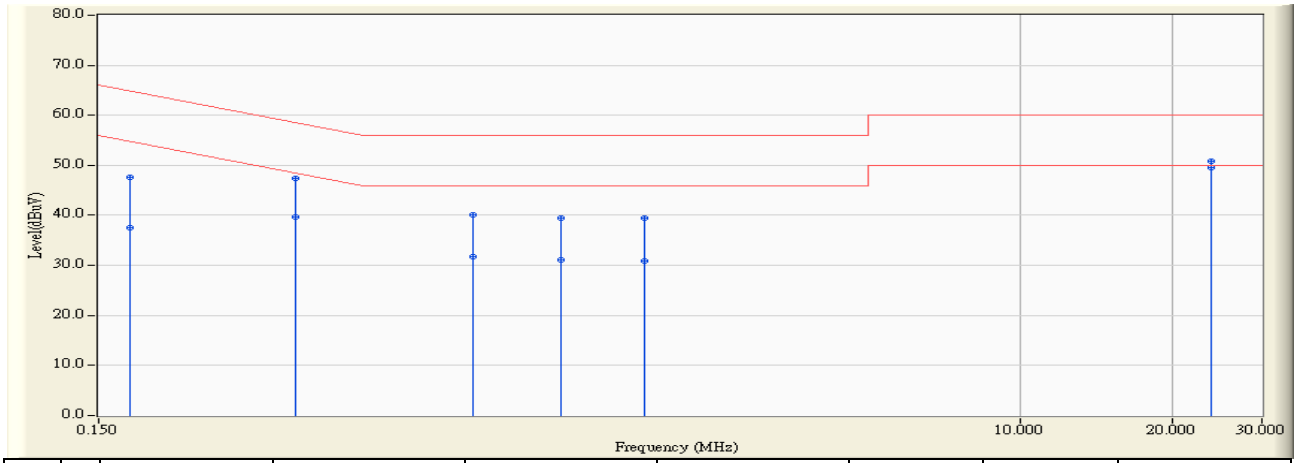



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.170 | 9.638 | 37.150 | 46.788 | -18.195 | 64.983 | QUASIPEAK |
| 2 | | 0.170 | 9.638 | 27.560 | 37.198 | -17.785 | 54.983 | AVERAGE |
| 3 | | 0.369 | 9.692 | 37.560 | 47.252 | -11.277 | 58.529 | QUASIPEAK |
| 4 | | 0.369 | 9.692 | 30.100 | 39.792 | -8.737 | 48.529 | AVERAGE |
| 5 | | 1.154 | 9.757 | 29.610 | 39.367 | -16.633 | 56.000 | QUASIPEAK |
| 6 | | 1.154 | 9.757 | 21.310 | 31.067 | -14.933 | 46.000 | AVERAGE |
| 7 | | 1.521 | 9.797 | 29.880 | 39.677 | -16.323 | 56.000 | QUASIPEAK |
| 8 | | 1.521 | 9.797 | 21.480 | 31.277 | -14.723 | 46.000 | AVERAGE |
| 9 | | 2.896 | 9.884 | 29.460 | 39.344 | -16.656 | 56.000 | QUASIPEAK |
| 10 | | 2.896 | 9.884 | 21.100 | 30.984 | -15.016 | 46.000 | AVERAGE |
| 11 | | 23.752 | 10.198 | 40.600 | 50.798 | -9.202 | 60.000 | QUASIPEAK |
| 12 | * | 23.752 | 10.198 | 39.540 | 49.738 | -0.262 | 50.000 | AVERAGE |

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : SR2** | **Time : 2014/08/08 - 13:55** |
| **Limit : CISPR_B_00M_QP** | **Margin : 10** |
| **Probe : SR2_LISN(16A)-3_0822 - Line2** | **Power : AC 120V 60Hz** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 ch6** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.173 | 9.626 | 37.910 | 47.536 | -17.258 | 64.794 | QUASIPEAK |
| 2 | | 0.173 | 9.626 | 27.900 | 37.526 | -17.268 | 54.794 | AVERAGE |
| 3 | | 0.369 | 9.674 | 37.680 | 47.354 | -11.175 | 58.529 | QUASIPEAK |
| 4 | | 0.369 | 9.674 | 30.060 | 39.734 | -8.795 | 48.529 | AVERAGE |
| 5 | | 0.826 | 9.717 | 30.420 | 40.137 | -15.863 | 56.000 | QUASIPEAK |
| 6 | | 0.826 | 9.717 | 22.020 | 31.737 | -14.263 | 46.000 | AVERAGE |
| 7 | | 1.236 | 9.746 | 29.790 | 39.536 | -16.464 | 56.000 | QUASIPEAK |
| 8 | | 1.236 | 9.746 | 21.430 | 31.176 | -14.824 | 46.000 | AVERAGE |
| 9 | | 1.806 | 9.808 | 29.640 | 39.449 | -16.551 | 56.000 | QUASIPEAK |
| 10 | | 1.806 | 9.808 | 20.980 | 30.789 | -15.211 | 46.000 | AVERAGE |
| 11 | | 23.759 | 10.335 | 40.400 | 50.735 | -9.265 | 60.000 | QUASIPEAK |
| 12 | * | 23.759 | 10.335 | 39.250 | 49.585 | -0.415 | 50.000 | AVERAGE |

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

# 3. Peak Power Output

## 3.1. Test Equipment

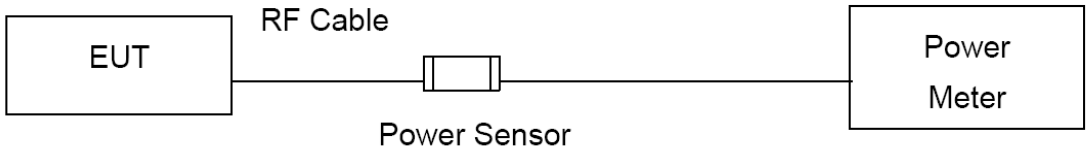
The following test equipments are used during the test:

Peak Power / SR7

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Power Meter | Agilent | N1911A | MY45101353 | 2014/11/19 |
| Power Sensor | Agilent | N1921A | MY45241670 | 2014/11/19 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 3.2. Test Setup




## 3.3. Test procedures

The EUT was tested according to DTS test procedure section 9.1.2 of KDB558074 v03r02 measurement to FCC 47CFR 15.247 requirements.

## 3.4. Limits

The maximum peak power shall be less 1 Watt.

## 3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

## 3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

## 3.7. Test Result

| Product | Wireless Ceiling Access Point | | |
|---|---|---|---|
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11b | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
| 1 | 2412 | 19.87 | 27 | Pass |
| 6 | 2437 | 19.72 | 27 | Pass |
| 11 | 2462 | 20.34 | 27 | Pass |

The worst emission of data rate is 1Mbps.

| Peak Power Output Value (dBm) | | | | | | |
|---|---|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Data Rate | | | | Required Limit |
| | | 1 | 2 | 5.5 | 11 | |
| 1 | 2412 | 19.87 | -- | -- | -- | 27dBm |
| 6 | 2437 | 19.72 | 19.70 | 19.68 | 19.65 | 27dBm |
| 11 | 2462 | 20.34 | -- | -- | -- | 27dBm |

Note: Measure Level =Reading value + cable loss

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11g | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
| 1 | 2412 | 25.52 | 27 | Pass |
| 6 | 2437 | 25.31 | 27 | Pass |
| 11 | 2462 | 26.06 | 27 | Pass |

The worst emission of data rate is 6Mbps.

| Peak Power Output (dBm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel No | Frequency (MHz) | Data Rate | | | | | | | Required Limit |
| | | 6 | 12 | 18 | 24 | 36 | 48 | 54 | |
| 1 | 2412 | 25.52 | -- | -- | -- | -- | -- | -- | 27dBm |
| 6 | 2437 | 25.31 | 25.29 | 25.27 | 24.26 | 24.24 | 24.22 | 24.21 | 27dBm |
| 11 | 2462 | 26.06 | -- | -- | -- | -- | -- | -- | 27dBm |

Note: Measure Level =Reading value + cable loss

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 20MHz (ANT 0)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | 19.89 | 24 | Pass |
| 6 | 2437 | 20.09 | 24 | Pass |
| 11 | 2462 | 20.21 | 24 | Pass |

The worst emission of data rate is 6.5 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | 13 | 6.5 | 13 | 19.5 | 26 | 39 | 52 | 58.5 | 65 | |
| 1 | 2412 | 19.89 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 20.09 | 20.08 | 20.06 | 20.05 | 20.04 | 20.02 | 20.01 | 19.98 | 24dBm |
| 11 | 2462 | 20.21 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 20MHz (ANT 1)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | 20.40 | 24 | Pass |
| 6 | 2437 | 21.23 | 24 | Pass |
| 11 | 2462 | 20.83 | 24 | Pass |

The worst emission of data rate is 6.5 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | 13 | 6.5 | 13 | 19.5 | 26 | 39 | 52 | 58.5 | 65 | |
| 1 | 2412 | 20.40 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 21.23 | 21.22 | 21.20 | 20.98 | 20.97 | 20.95 | 20.93 | 20.91 | 24dBm |
| 11 | 2462 | 20.83 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 20MHz (ANT 0+1)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 1 | 2412 | 23.16 | 24 | Pass |
| 6 | 2437 | 23.71 | 24 | Pass |
| 11 | 2462 | 23.54 | 24 | Pass |

The worst emission of data rate is 6.5 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | 13 | 6.5 | 13 | 19.5 | 26 | 39 | 52 | 58.5 | 65 | |
| 1 | 2412 | 23.16 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 23.71 | 23.69 | 23.68 | 23.66 | 22.65 | 22.63 | 22.61 | 22.60 | 24dBm |
| 11 | 2462 | 23.54 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 40MHz (ANT 0)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 3 | 2422 | 18.84 | 24 | Pass |
| 6 | 2437 | 19.74 | 24 | Pass |
| 9 | 2452 | 19.86 | 24 | Pass |

The worst emission of data rate is 27 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | Data Rate 6.5 | Data Rate 13.5 | 27 | 40.5 | 54 | 81 | 108 | 121.5 | 135 | |
| 3 | 2422 | 18.84 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 19.74 | 19.73 | 19.71 | 19.70 | 18.98 | 18.96 | 18.95 | 18.94 | 24dBm |
| 9 | 2452 | 19.86 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 40MHz (ANT 1)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 3 | 2412 | 19.71 | 24 | Pass |
| 6 | 2437 | 20.90 | 24 | Pass |
| 9 | 2462 | 20.66 | 24 | Pass |

The worst emission of data rate is 27 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | Data Rate 6.5 | 13.5 | 27 | 40.5 | 54 | 81 | 108 | 121.5 | 135 | |
| 3 | 2422 | 19.71 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 20.90 | 20.89 | 20.87 | 20.86 | 20.84 | 20.83 | 19.81 | 19.80 | 24dBm |
| 9 | 2452 | 20.66 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

| Product | Wireless Ceiling Access Point | | |
|---|---|---|---|
| Test Item | Peak Power Output | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

IEEE 802.11n 40MHz (ANT 0+1)

| Channel No. | Frequency (MHz) | Measure Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| 3 | 2412 | 22.307 | 24 | Pass |
| 6 | 2437 | 23.369 | 24 | Pass |
| 9 | 2462 | 23.289 | 24 | Pass |

The worst emission of data rate is 27 Mbps.

| Peak Power Output (dBm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCS Index | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Required Limit |
| Channel No | Frequency (MHz) | Data Rate | | | | | | | | |
| | | 13.5 | 27 | 40.5 | 54 | 81 | 108 | 121.5 | 135 | |
| 3 | 2422 | 22.31 | -- | -- | -- | -- | -- | -- | -- | 24dBm |
| 6 | 2437 | 23.37 | 23.36 | 23.35 | 23.33 | 23.31 | 23.29 | 23.27 | 23.25 | 24dBm |
| 9 | 2452 | 23.29 | -- | -- | -- | -- | -- | -- | -- | 24dBm |

# 4. Radiated Emission

## 4.1. Test Equipment

The following test equipments are used during the test:

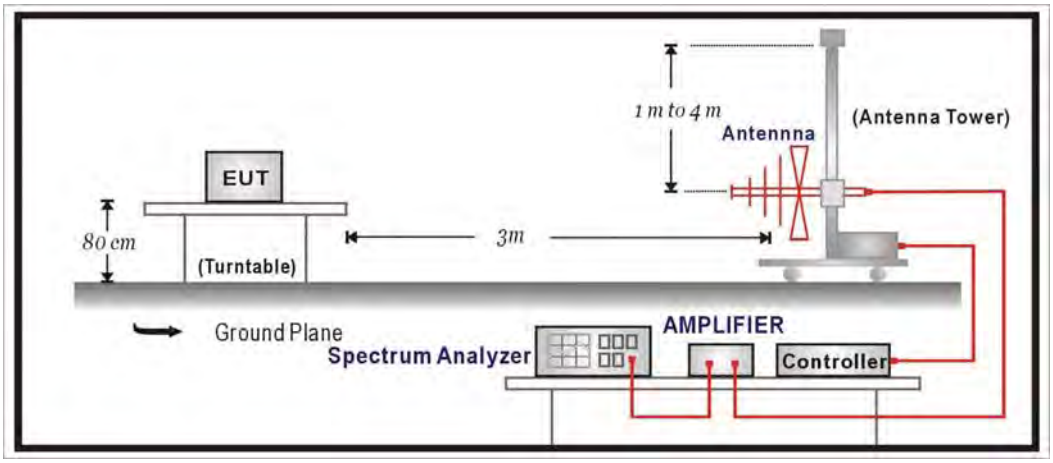
Radiated Emission / CB1

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Bilog Antenna | SCHAFFNER | CBL6112B | 2895(CB1) | 2015/08/14 |
| Double Ridged Guide Horn Antenna | Schwarzback | BBHA 9120 | D743 | 2015/02/12 |
| Pre-Amplifier | Quietek | AMF-4D. | 888003 | 2015/06/02 |
| Pre-Amplifier | QuieTek | AP-025C | CHM-0706049 | 2015/02/06 |
| Spectrum Analyzer | Agilent | E4440A | MY46187335 | 2015/01/12 |
| k Type Cable | Huber Suhner | Sucoflex 102 | 25623/2 | 2015/02/10 |

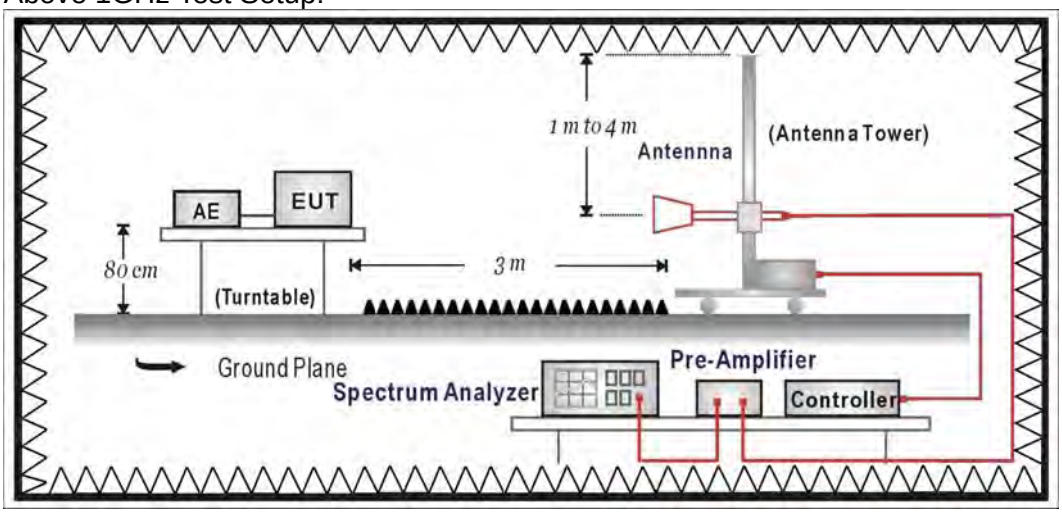
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 4.2. Test Setup

Under 1GHz Test Setup:




Above 1GHz Test Setup:



## 4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209 Limits | | |
|---|---|---|
| Frequency MHz | dBuV/m | dBuV/m |
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

## 4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.
On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

## 4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

## 4.6. Uncertainty

The measurement uncertainty

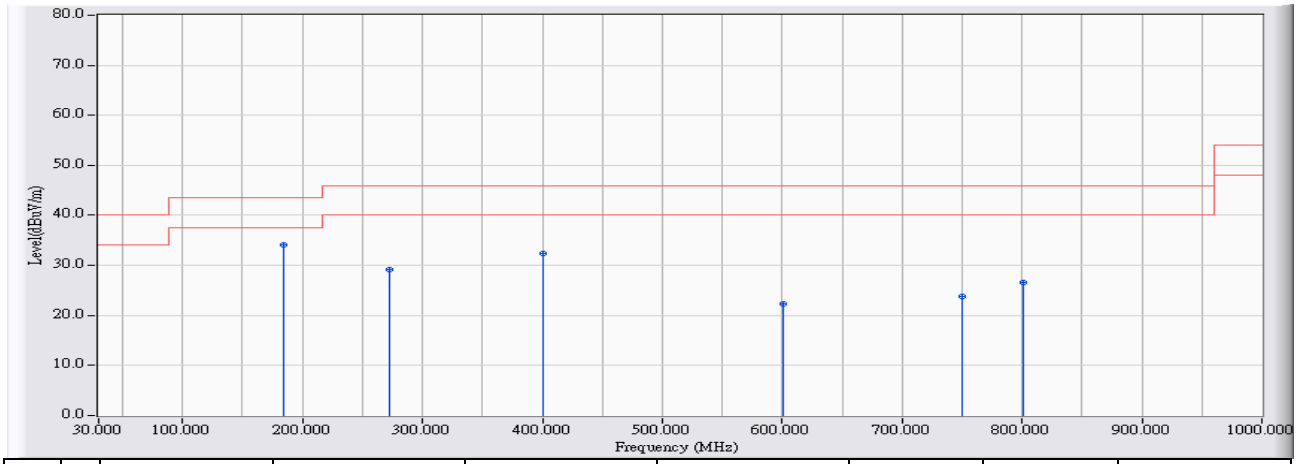
30MHz～1GHz as ±3.43dB

1GHz～26.5Ghz as ±3.65dB

## 4.7. Test Result

### 30MHz-1GHz Spurious

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:29** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b ch6 TX** |

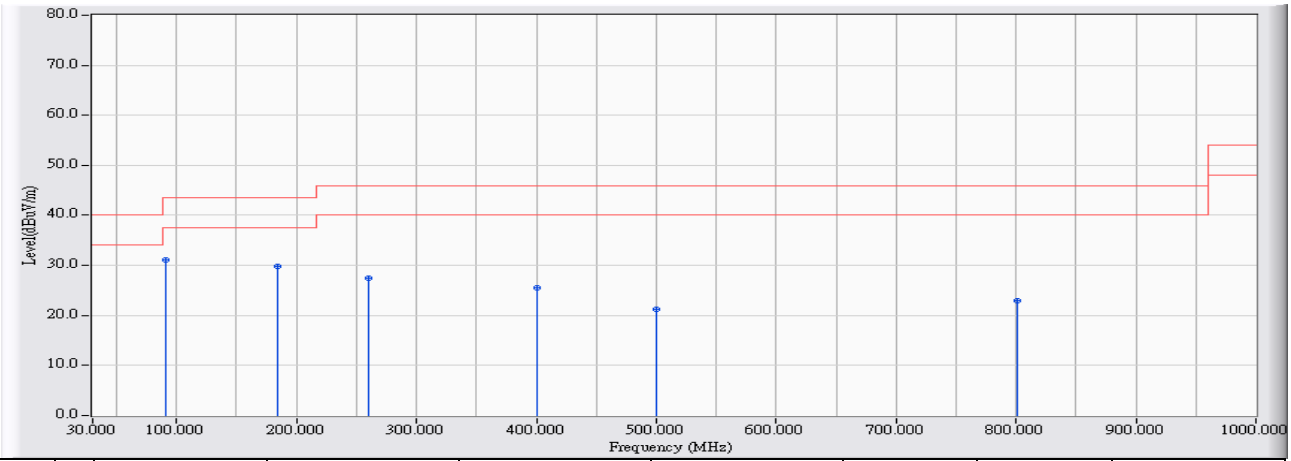



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 184.230 | -24.872 | 59.012 | 34.140 | -9.360 | 43.500 | QUASIPEAK |
| 2 | | 272.015 | -20.762 | 49.865 | 29.103 | -16.897 | 46.000 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 49.784 | 32.328 | -13.672 | 46.000 | QUASIPEAK |
| 4 | | 600.360 | -14.278 | 36.496 | 22.217 | -23.783 | 46.000 | QUASIPEAK |
| 5 | | 750.225 | -12.558 | 36.364 | 23.806 | -22.194 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 38.149 | 26.501 | -19.499 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:30** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b ch6 TX** |

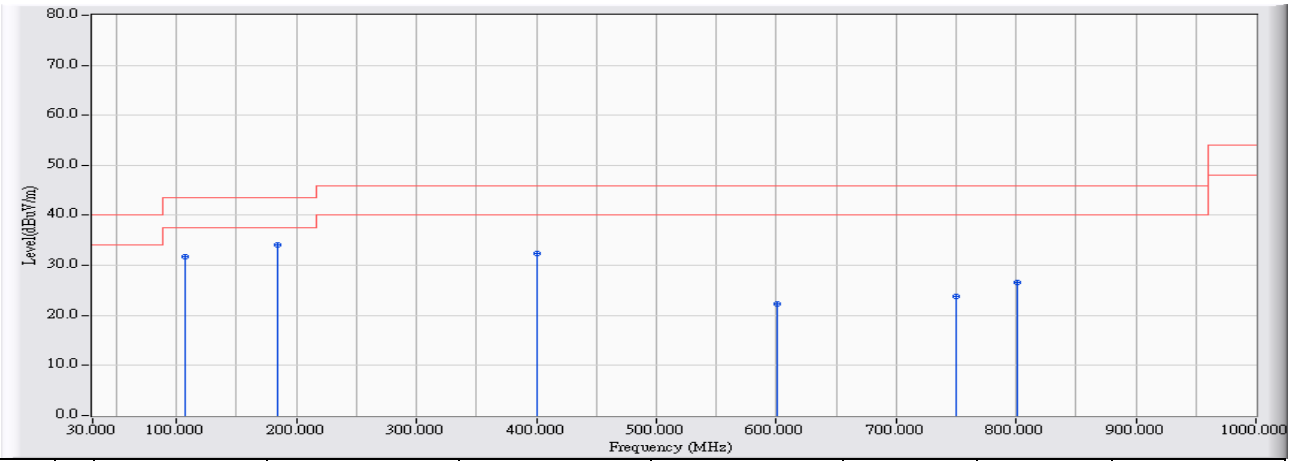



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 90.625 | -25.887 | 57.018 | 31.131 | -12.369 | 43.500 | QUASIPEAK |
| 2 | | 184.230 | -24.872 | 54.763 | 29.891 | -13.609 | 43.500 | QUASIPEAK |
| 3 | | 259.890 | -20.958 | 48.466 | 27.508 | -18.492 | 46.000 | QUASIPEAK |
| 4 | | 400.055 | -17.456 | 42.981 | 25.525 | -20.475 | 46.000 | QUASIPEAK |
| 5 | | 500.450 | -15.635 | 36.830 | 21.195 | -24.805 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 34.499 | 22.851 | -23.149 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:28** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g ch6 TX** |

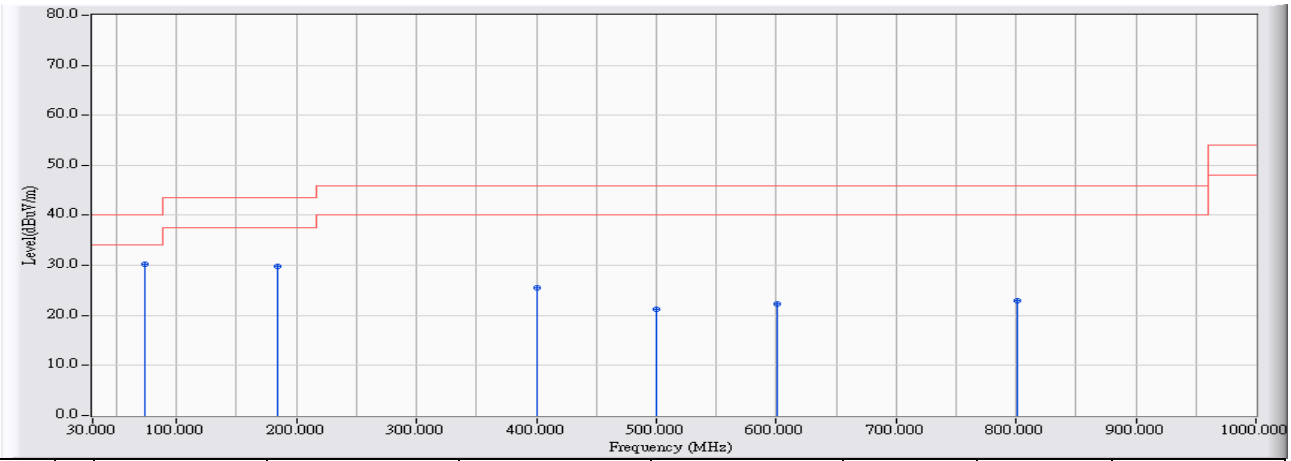



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 106.630 | -23.211 | 55.019 | 31.808 | -11.692 | 43.500 | QUASIPEAK |
| 2 | * | 184.230 | -24.872 | 59.012 | 34.140 | -9.360 | 43.500 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 49.784 | 32.328 | -13.672 | 46.000 | QUASIPEAK |
| 4 | | 600.360 | -14.278 | 36.496 | 22.217 | -23.783 | 46.000 | QUASIPEAK |
| 5 | | 750.225 | -12.558 | 36.364 | 23.806 | -22.194 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 38.149 | 26.501 | -19.499 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:26** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g ch6 TX** |

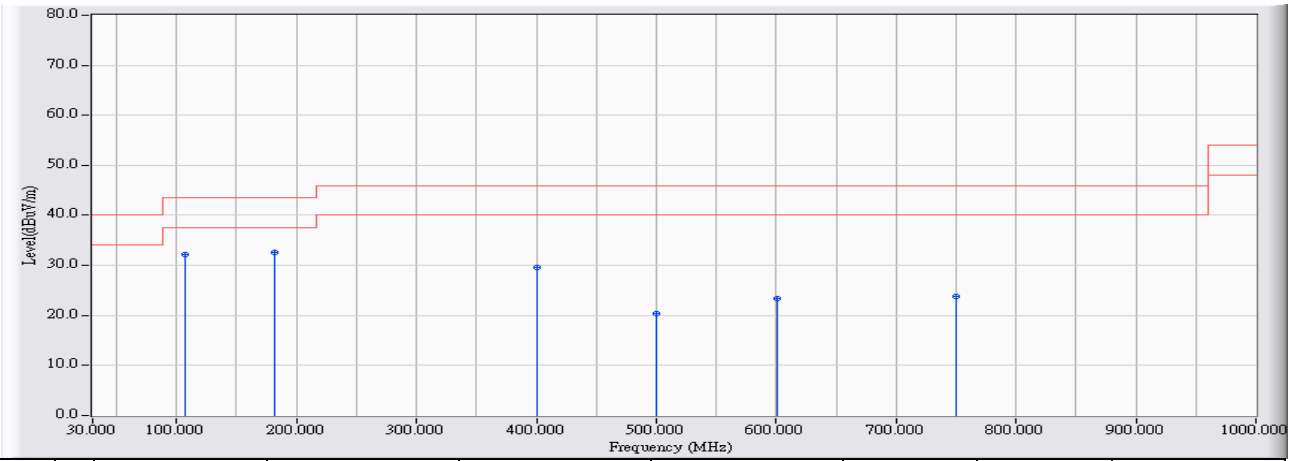



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 74.135 | -27.731 | 57.920 | 30.190 | -9.810 | 40.000 | QUASIPEAK |
| 2 | | 184.230 | -24.872 | 54.763 | 29.891 | -13.609 | 43.500 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 42.981 | 25.525 | -20.475 | 46.000 | QUASIPEAK |
| 4 | | 500.450 | -15.635 | 36.830 | 21.195 | -24.805 | 46.000 | QUASIPEAK |
| 5 | | 600.360 | -14.278 | 36.500 | 22.221 | -23.779 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 34.499 | 22.851 | -23.149 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:04** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 ch6 TX** |

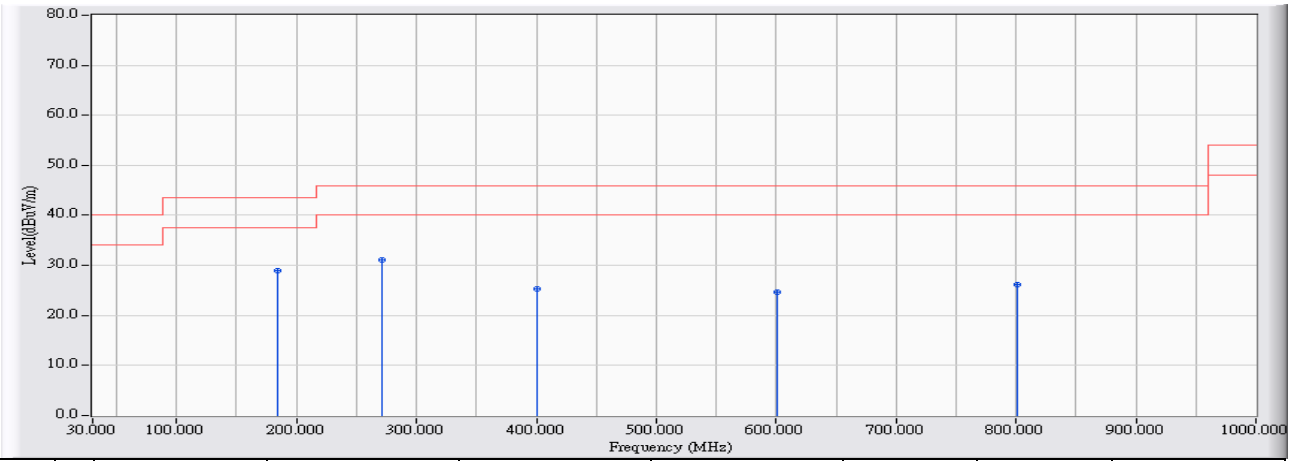



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 106.630 | -23.211 | 55.287 | 32.076 | -11.424 | 43.500 | QUASIPEAK |
| 2 | * | 182.290 | -24.880 | 57.578 | 32.698 | -10.802 | 43.500 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 46.982 | 29.526 | -16.474 | 46.000 | QUASIPEAK |
| 4 | | 500.450 | -15.635 | 36.064 | 20.429 | -25.571 | 46.000 | QUASIPEAK |
| 5 | | 600.360 | -14.278 | 37.663 | 23.384 | -22.616 | 46.000 | QUASIPEAK |
| 6 | | 750.225 | -12.558 | 36.468 | 23.910 | -22.090 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:15** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 ch6 TX** |

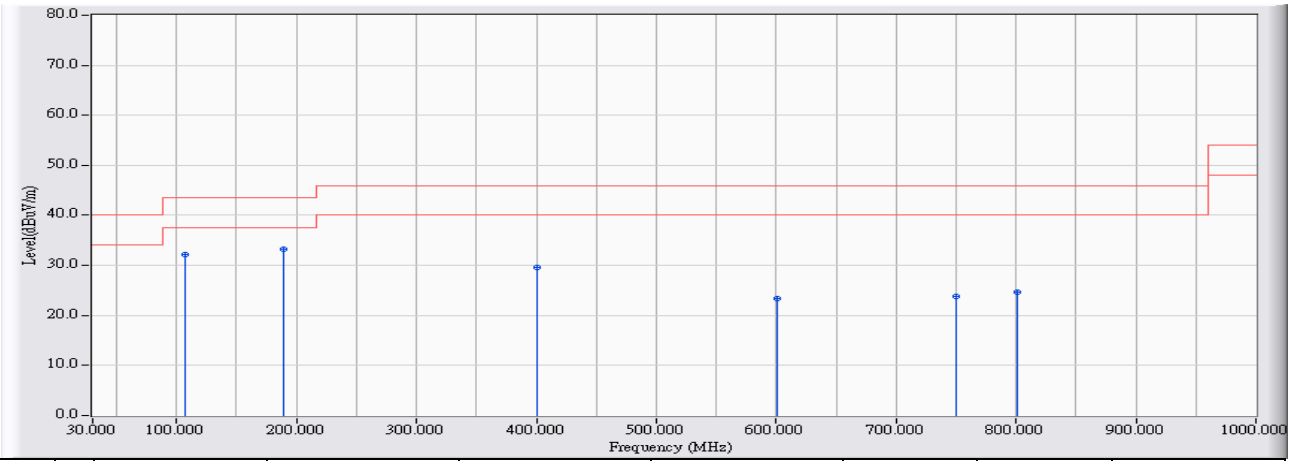



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 184.230 | -24.872 | 53.738 | 28.866 | -14.634 | 43.500 | QUASIPEAK |
| 2 | | 271.045 | -20.778 | 51.952 | 31.174 | -14.826 | 46.000 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 42.867 | 25.411 | -20.589 | 46.000 | QUASIPEAK |
| 4 | | 600.360 | -14.278 | 38.991 | 24.712 | -21.288 | 46.000 | QUASIPEAK |
| 5 | | 800.665 | -11.648 | 37.710 | 26.062 | -19.938 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:08** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 ch6 TX** |

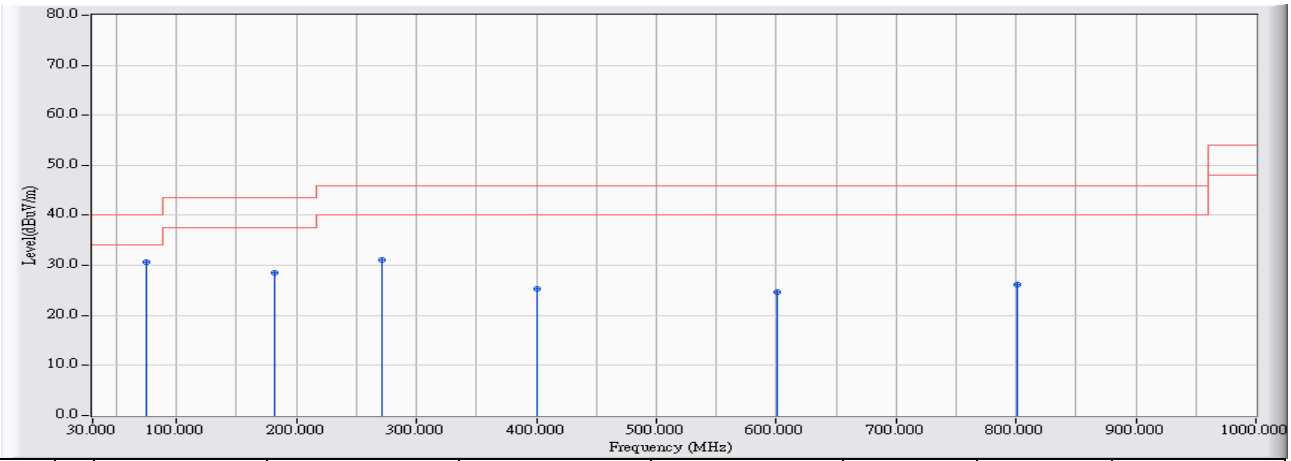



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 106.630 | -23.211 | 55.287 | 32.076 | -11.424 | 43.500 | QUASIPEAK |
| 2 | * | 189.565 | -24.847 | 58.107 | 33.260 | -10.240 | 43.500 | QUASIPEAK |
| 3 | | 400.055 | -17.456 | 46.982 | 29.526 | -16.474 | 46.000 | QUASIPEAK |
| 4 | | 600.360 | -14.278 | 37.663 | 23.384 | -22.616 | 46.000 | QUASIPEAK |
| 5 | | 750.225 | -12.558 | 36.468 | 23.910 | -22.090 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 36.339 | 24.691 | -21.309 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 20:14** |
| **Limit : FCC_CLASS_B_03M_QP** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL** | **Power : DC 56V(Power by POE)** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 ch6 TX** |



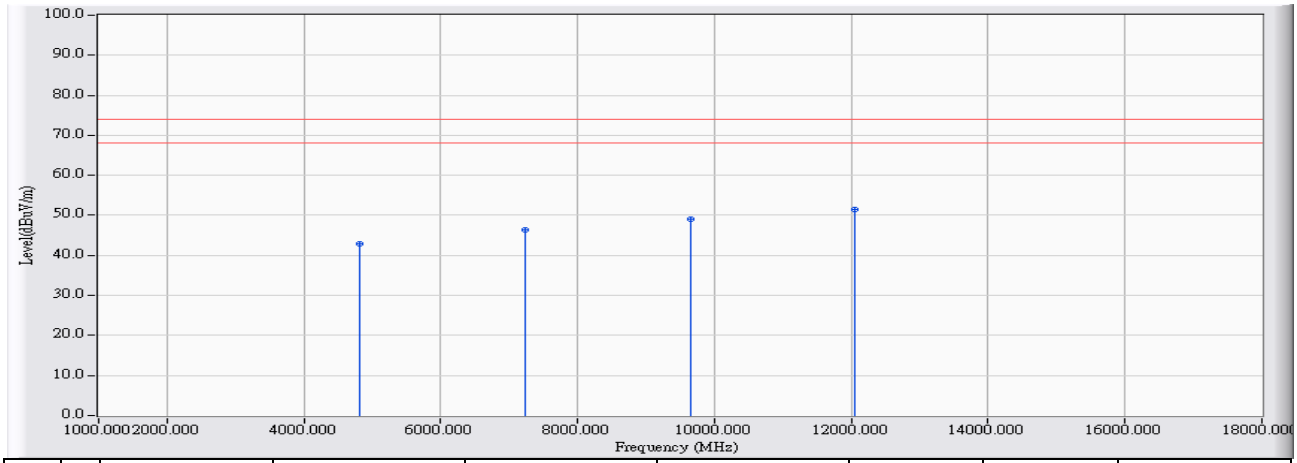

| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 74.620 | -27.695 | 58.268 | 30.573 | -9.427 | 40.000 | QUASIPEAK |
| 2 | | 181.805 | -24.882 | 53.350 | 28.467 | -15.033 | 43.500 | QUASIPEAK |
| 3 | | 271.045 | -20.778 | 51.952 | 31.174 | -14.826 | 46.000 | QUASIPEAK |
| 4 | | 400.055 | -17.456 | 42.867 | 25.411 | -20.589 | 46.000 | QUASIPEAK |
| 5 | | 600.360 | -14.278 | 38.991 | 24.712 | -21.288 | 46.000 | QUASIPEAK |
| 6 | | 800.665 | -11.648 | 37.710 | 26.062 | -19.938 | 46.000 | QUASIPEAK |

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

## Above 1GHz Spurious

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:02** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH1** |

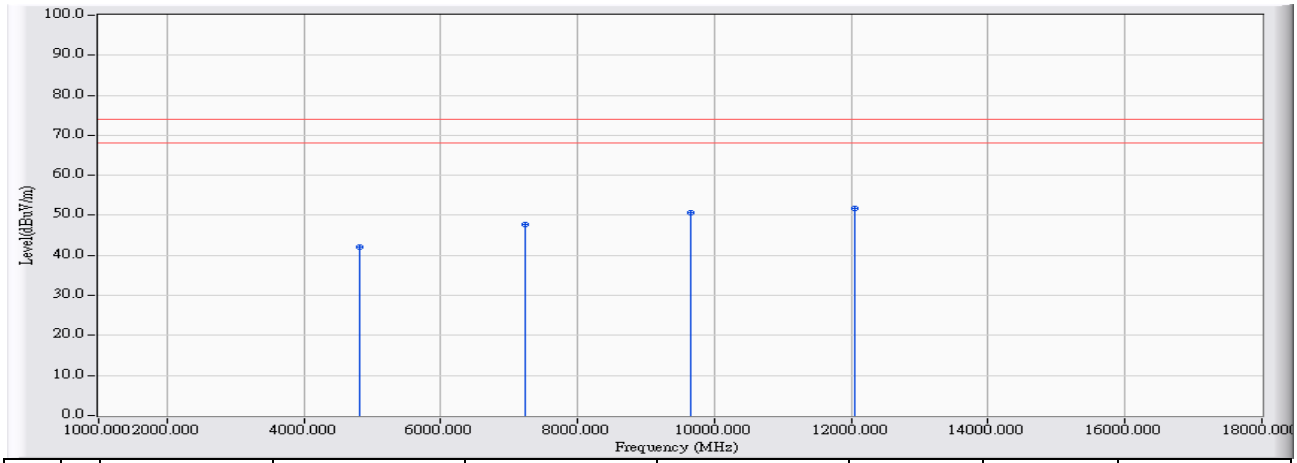



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | -1.979 | 44.855 | 42.876 | -31.124 | 74.000 | PEAK |
| 2 | | 7236.000 | 4.173 | 42.299 | 46.472 | -27.528 | 74.000 | PEAK |
| 3 | | 9648.000 | 7.909 | 41.056 | 48.965 | -25.035 | 74.000 | PEAK |
| 4 | * | 12060.000 | 11.272 | 40.259 | 51.531 | -22.469 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 13:54** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH1** |

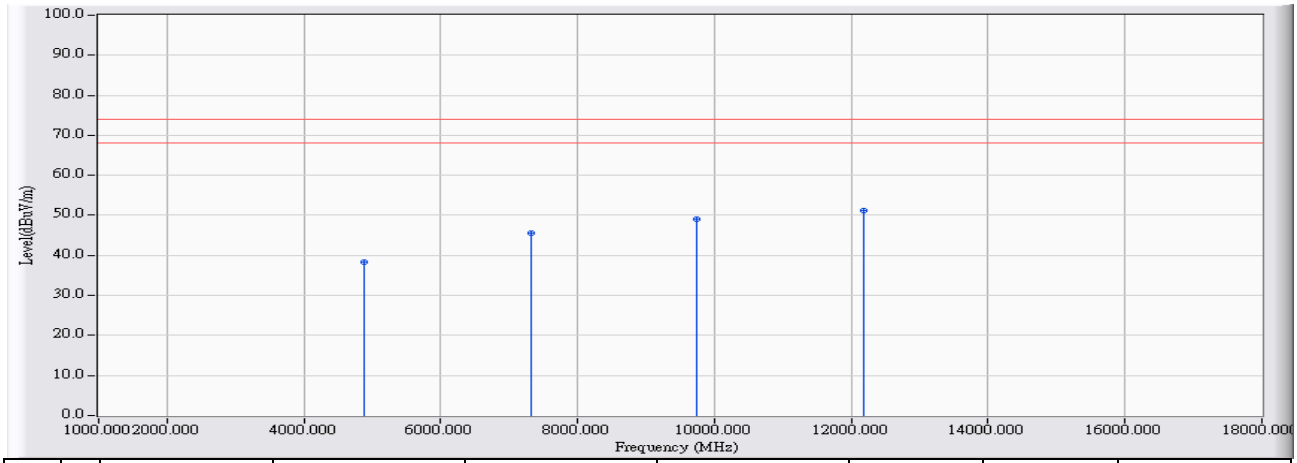



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | -1.979 | 44.132 | 42.153 | -31.847 | 74.000 | PEAK |
| 2 | | 7236.000 | 4.173 | 43.505 | 47.678 | -26.322 | 74.000 | PEAK |
| 3 | | 9648.000 | 7.909 | 42.745 | 50.654 | -23.346 | 74.000 | PEAK |
| 4 | * | 12060.000 | 11.272 | 40.462 | 51.734 | -22.266 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:07** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH6** |

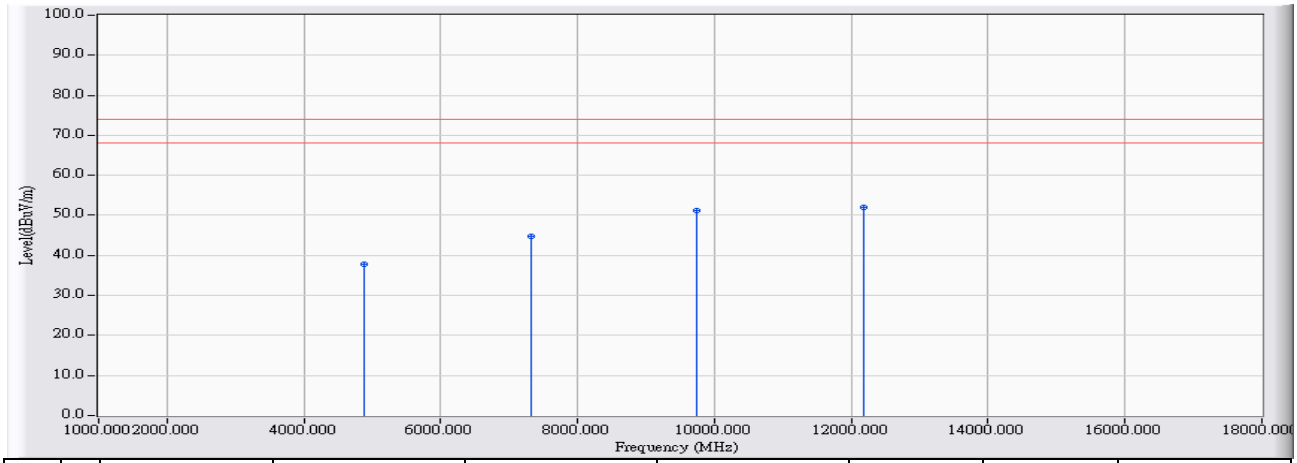



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 40.230 | 38.435 | -35.565 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 41.320 | 45.669 | -28.331 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 40.980 | 48.947 | -25.053 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.030 | 51.312 | -22.688 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:11** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH6** |

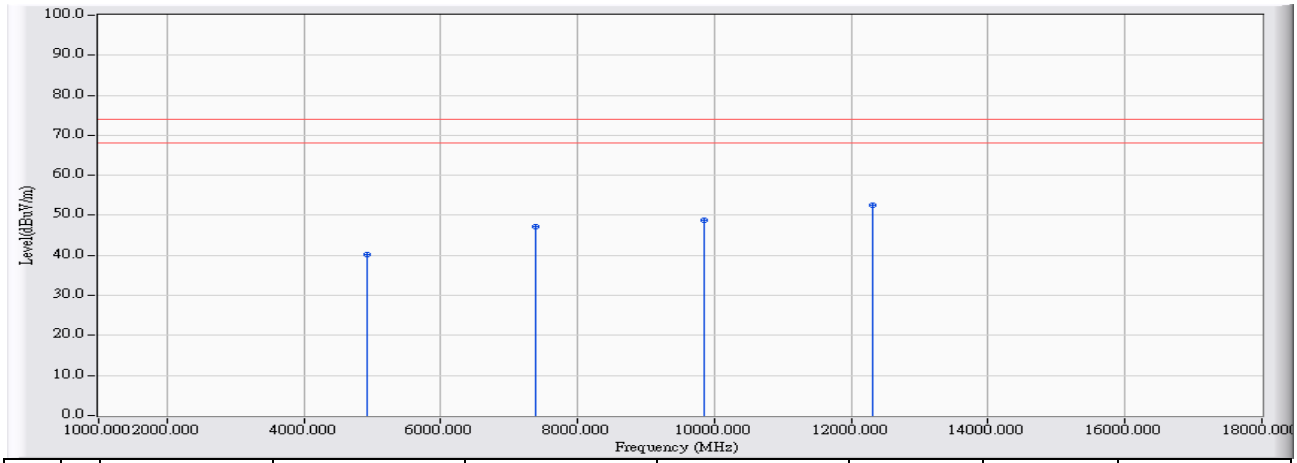



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 39.480 | 37.685 | -36.315 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 40.453 | 44.802 | -29.198 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 43.215 | 51.182 | -22.818 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.651 | 51.933 | -22.067 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:17** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH11** |

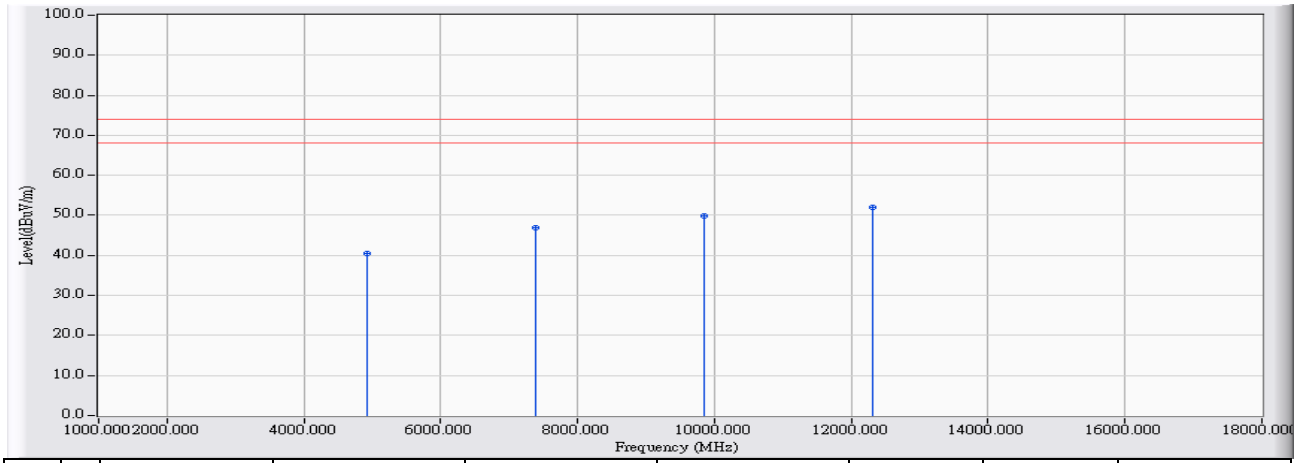



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | -1.611 | 41.784 | 40.173 | -33.827 | 74.000 | PEAK |
| 2 | | 7386.000 | 4.524 | 42.786 | 47.310 | -26.690 | 74.000 | PEAK |
| 3 | | 9848.000 | 8.025 | 40.640 | 48.665 | -25.335 | 74.000 | PEAK |
| 4 | * | 12310.000 | 11.292 | 41.372 | 52.664 | -21.336 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:14** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11b CH11** |

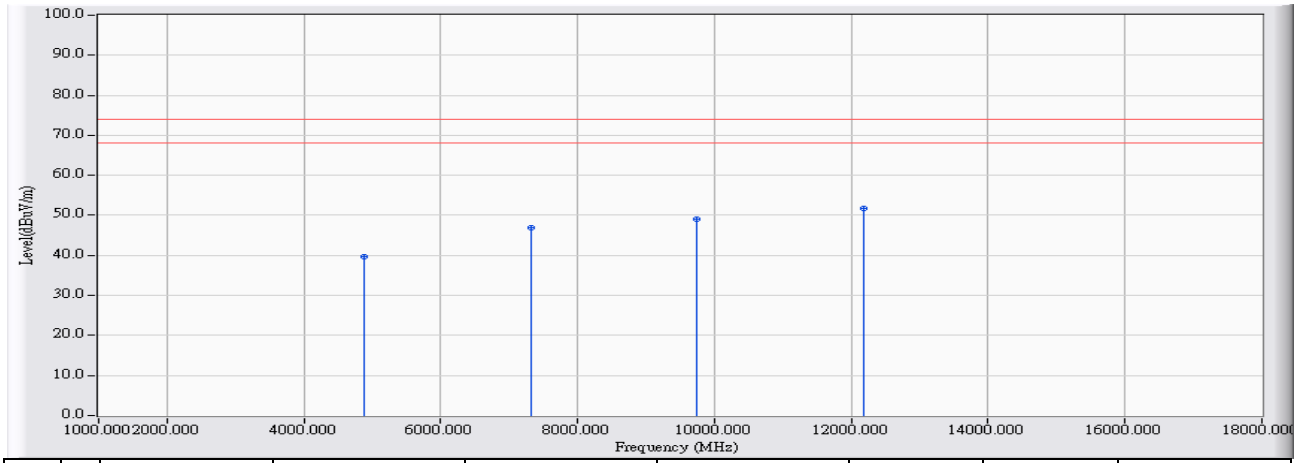



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | 32.580 | 42.140 | 40.529 | -33.471 | 74.000 | PEAK |
| 2 | | 7386.000 | 38.801 | 42.433 | 46.957 | -27.043 | 74.000 | PEAK |
| 3 | | 9848.000 | 41.564 | 41.870 | 49.895 | -24.105 | 74.000 | PEAK |
| 4 | * | 12310.000 | 42.544 | 40.823 | 52.115 | -21.885 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:50** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH1** |

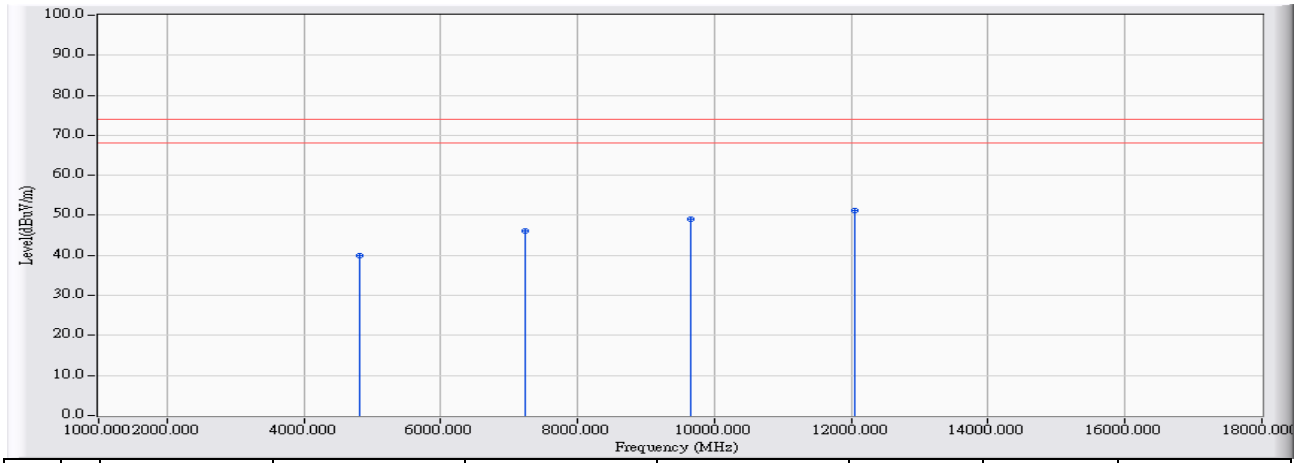



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 41.589 | 39.794 | -34.206 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 42.645 | 46.994 | -27.006 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 41.156 | 49.123 | -24.877 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.568 | 51.850 | -22.150 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:55** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH1** |

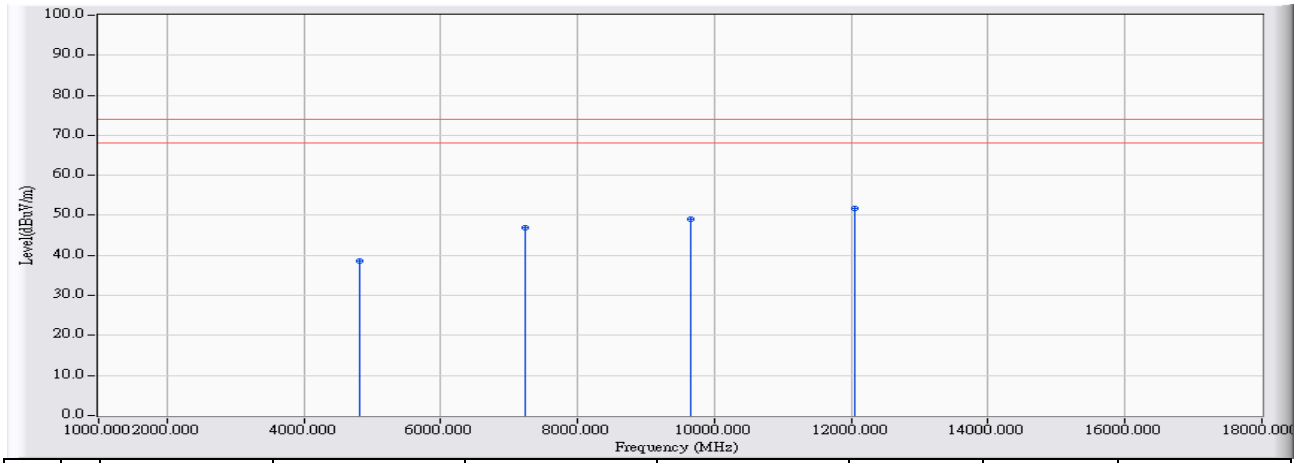



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | -1.979 | 42.023 | 40.044 | -33.956 | 74.000 | PEAK |
| 2 | | 7236.000 | 4.173 | 42.020 | 46.193 | -27.807 | 74.000 | PEAK |
| 3 | | 9648.000 | 7.909 | 41.214 | 49.123 | -24.877 | 74.000 | PEAK |
| 4 | * | 12060.000 | 11.272 | 39.874 | 51.146 | -22.854 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:50** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH6** |

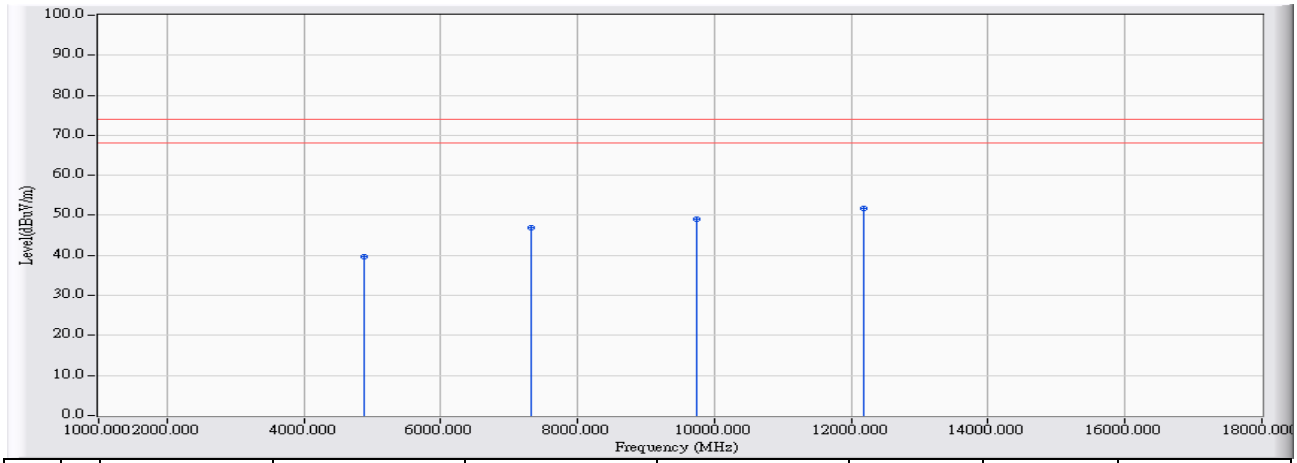



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | 32.332 | 40.562 | 38.583 | -35.417 | 74.000 | PEAK |
| 2 | | 7236.000 | 38.420 | 42.869 | 47.042 | -26.958 | 74.000 | PEAK |
| 3 | | 9648.000 | 41.368 | 41.254 | 49.163 | -24.837 | 74.000 | PEAK |
| 4 | * | 12060.000 | 42.724 | 40.567 | 51.839 | -22.161 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:46** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH6** |

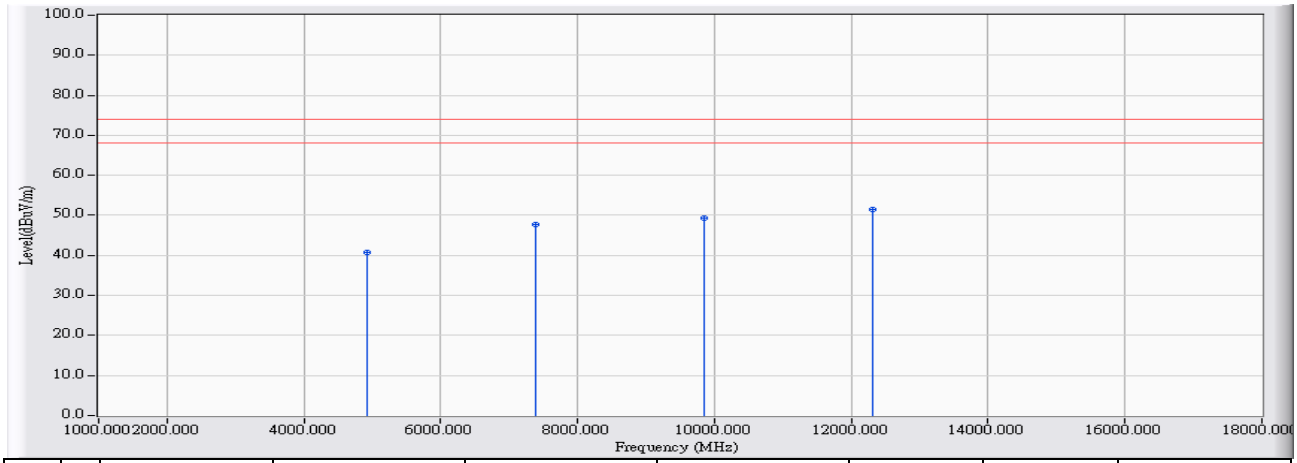



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 41.589 | 39.794 | -34.206 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 42.645 | 46.994 | -27.006 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 41.156 | 49.123 | -24.877 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.568 | 51.850 | -22.150 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:28** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH11** |

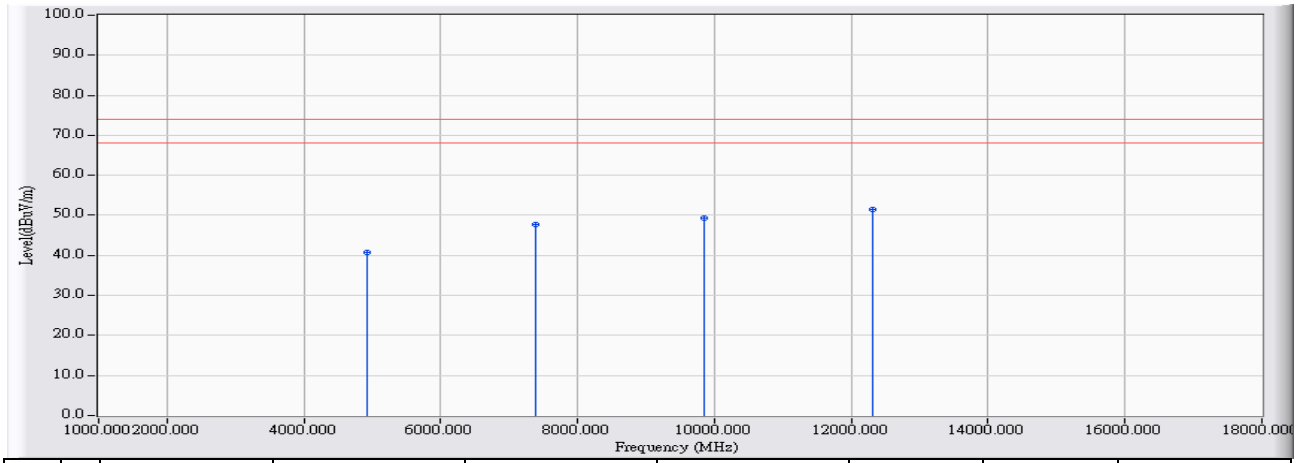



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | -1.611 | 42.450 | 40.839 | -33.161 | 74.000 | PEAK |
| 2 | | 7386.000 | 4.524 | 43.230 | 47.754 | -26.246 | 74.000 | PEAK |
| 3 | | 9848.000 | 8.025 | 41.432 | 49.457 | -24.543 | 74.000 | PEAK |
| 4 | * | 12310.000 | 11.292 | 40.239 | 51.531 | -22.469 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:28** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11g CH11** |

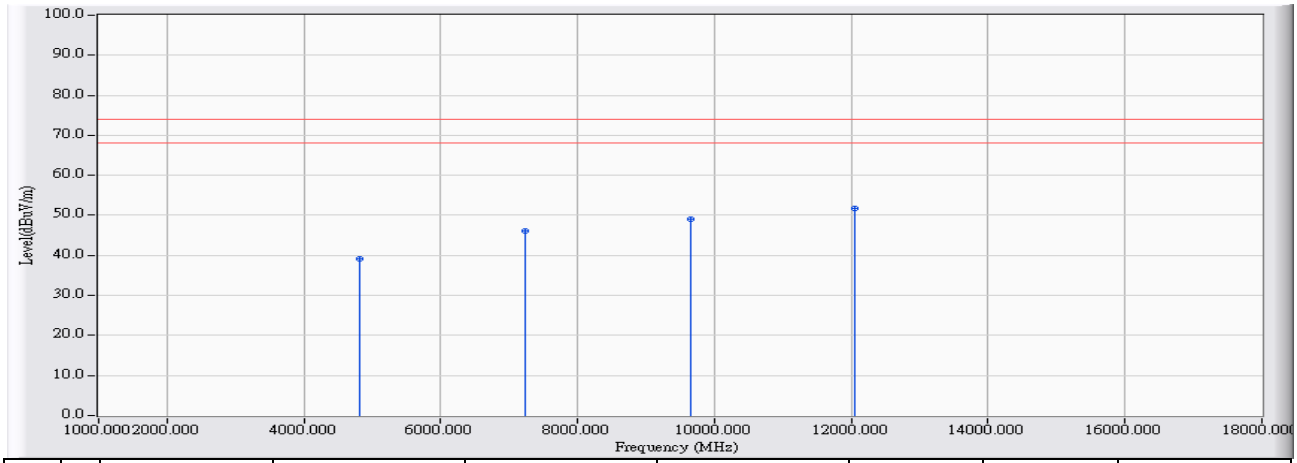



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | -1.611 | 42.450 | 40.839 | -33.161 | 74.000 | PEAK |
| 2 | | 7386.000 | 4.524 | 43.230 | 47.754 | -26.246 | 74.000 | PEAK |
| 3 | | 9848.000 | 8.025 | 41.432 | 49.457 | -24.543 | 74.000 | PEAK |
| 4 | * | 12310.000 | 11.292 | 40.239 | 51.531 | -22.469 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:01** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH1** |

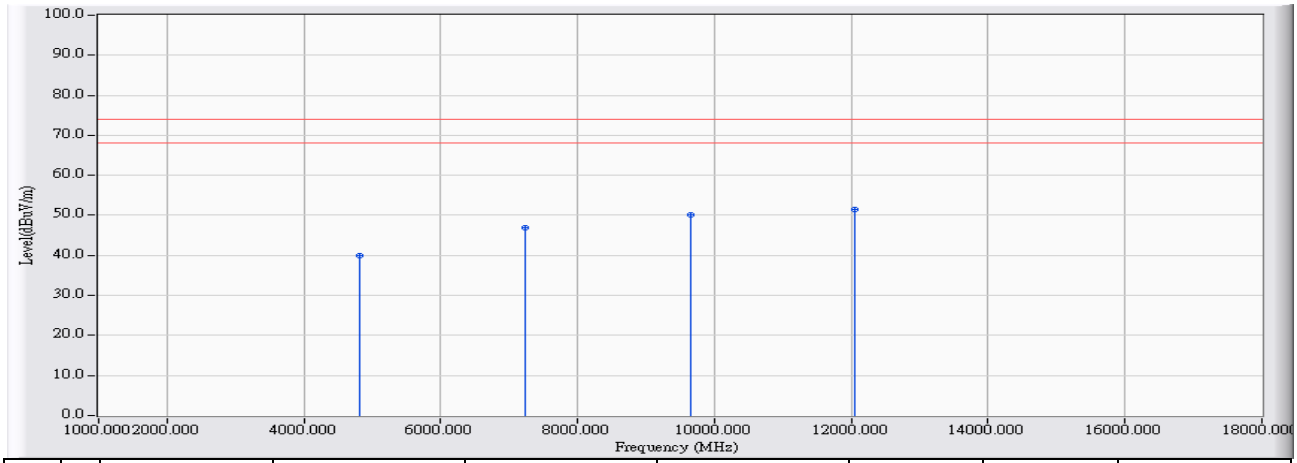



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | -1.979 | 41.000 | 39.021 | -34.979 | 74.000 | PEAK |
| 2 | | 7236.000 | 4.173 | 41.987 | 46.160 | -27.840 | 74.000 | PEAK |
| 3 | | 9648.000 | 7.909 | 41.249 | 49.158 | -24.842 | 74.000 | PEAK |
| 4 | * | 12060.000 | 11.272 | 40.549 | 51.821 | -22.179 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 14:57** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH1** |

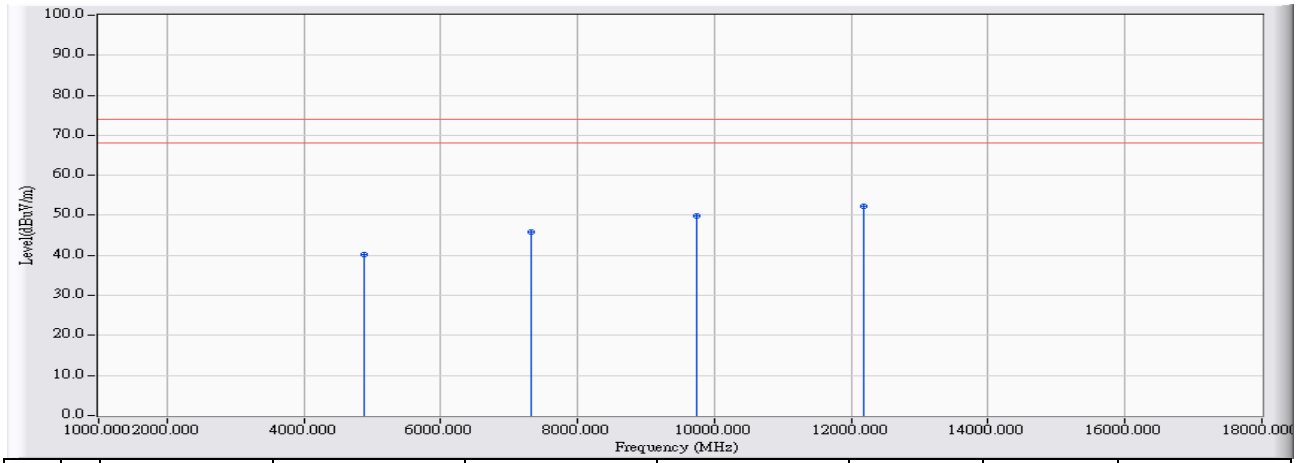



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4824.000 | -1.979 | 41.891 | 39.912 | -34.088 | 74.000 | PEAK |
| 2 | | 7236.000 | 4.173 | 42.710 | 46.883 | -27.117 | 74.000 | PEAK |
| 3 | | 9648.000 | 7.909 | 42.158 | 50.067 | -23.933 | 74.000 | PEAK |
| 4 | * | 12060.000 | 11.272 | 40.254 | 51.526 | -22.474 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:04** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH6** |

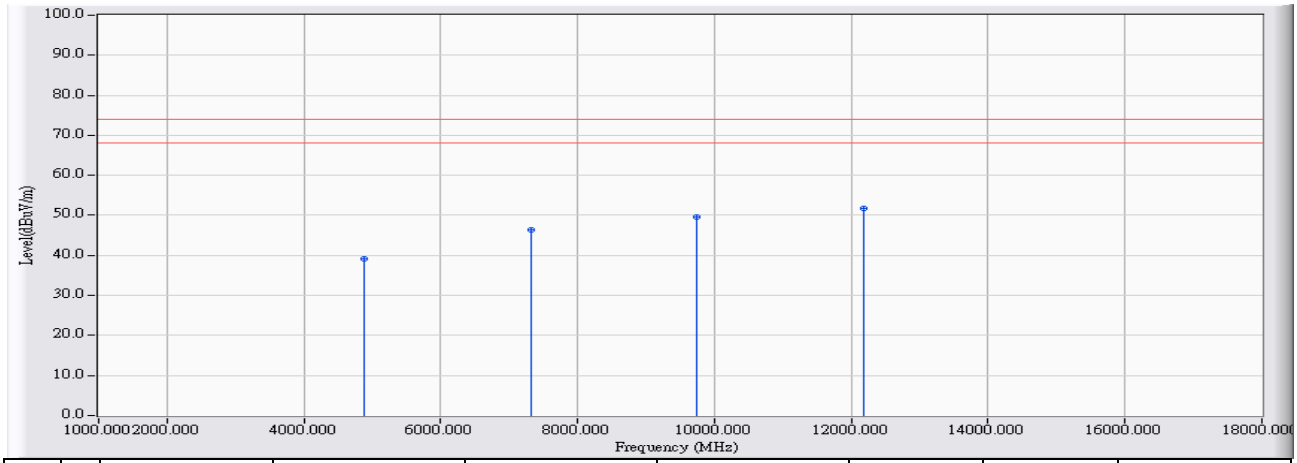



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 42.058 | 40.263 | -33.737 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 41.479 | 45.828 | -28.172 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 42.021 | 49.988 | -24.012 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 41.058 | 52.340 | -21.660 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:05** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH6** |

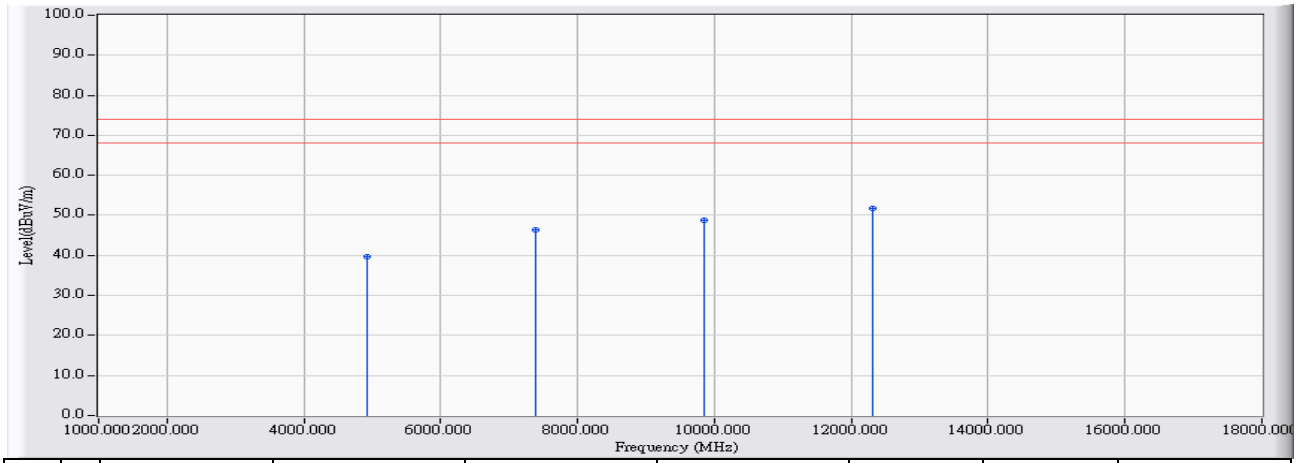



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 40.850 | 39.055 | -34.945 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 41.970 | 46.319 | -27.681 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 41.580 | 49.547 | -24.453 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.542 | 51.824 | -22.176 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:11** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH11** |

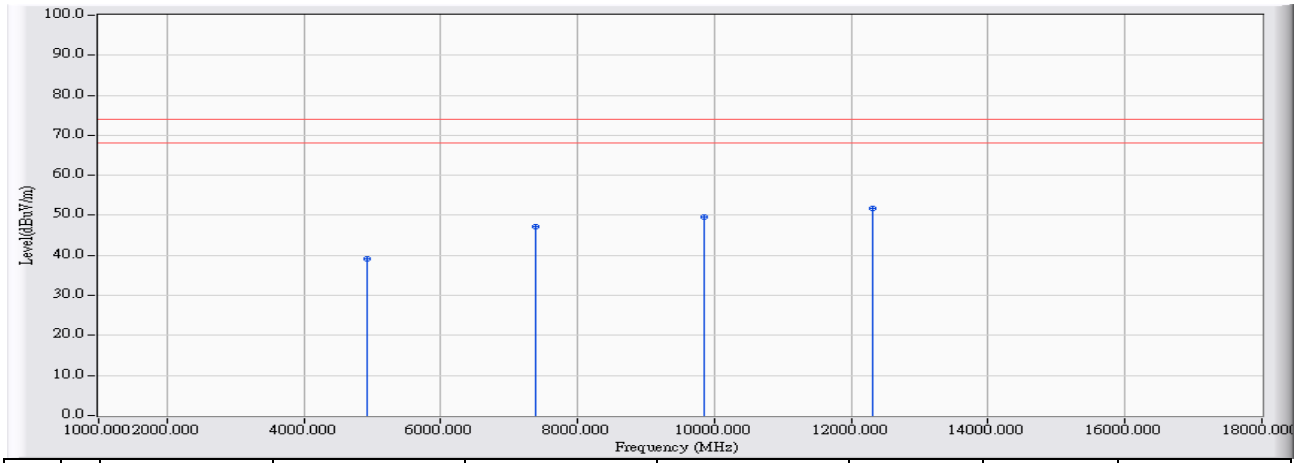



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | -1.611 | 41.187 | 39.576 | -34.424 | 74.000 | PEAK |
| 2 | | 7386.000 | 4.524 | 41.987 | 46.511 | -27.489 | 74.000 | PEAK |
| 3 | | 9848.000 | 8.025 | 40.890 | 48.915 | -25.085 | 74.000 | PEAK |
| 4 | * | 12310.000 | 11.292 | 40.512 | 51.804 | -22.196 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:08** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n20 CH11** |

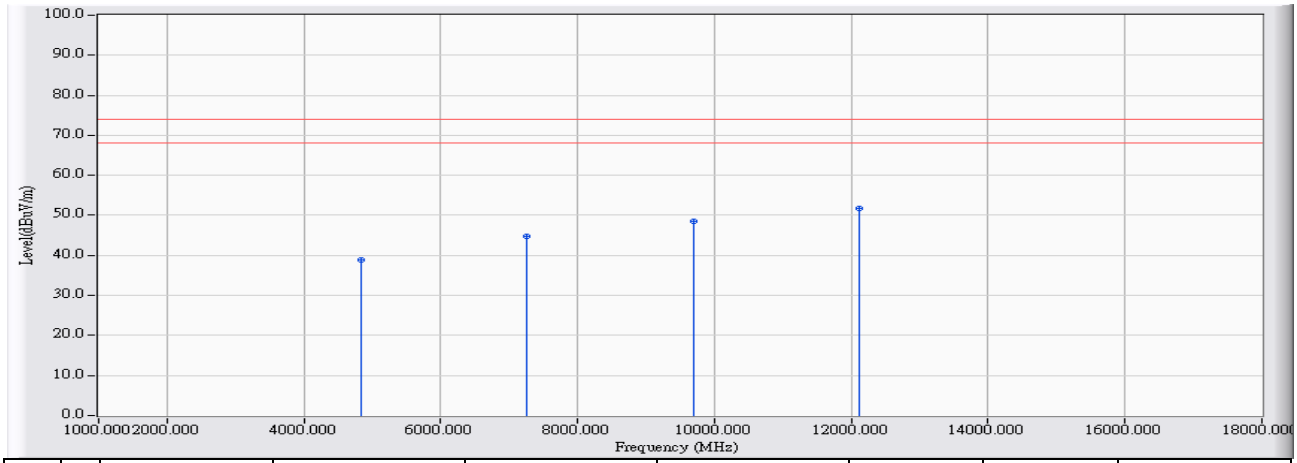



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4924.000 | -1.611 | 40.684 | 39.073 | -34.927 | 74.000 | PEAK |
| 2 | | 7386.000 | 4.524 | 42.654 | 47.178 | -26.822 | 74.000 | PEAK |
| 3 | | 9848.000 | 8.025 | 41.590 | 49.615 | -24.385 | 74.000 | PEAK |
| 4 | * | 12310.000 | 11.292 | 40.462 | 51.754 | -22.246 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:20** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH3** |

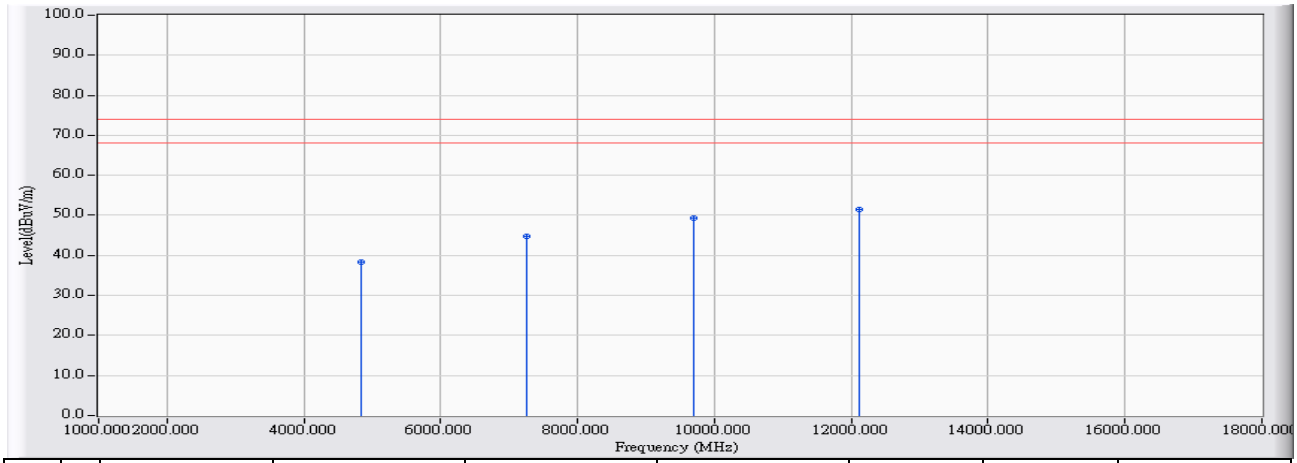



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4844.000 | -1.905 | 40.730 | 38.825 | -35.175 | 74.000 | PEAK |
| 2 | | 7266.000 | 4.243 | 40.650 | 44.893 | -29.107 | 74.000 | PEAK |
| 3 | | 9688.000 | 7.932 | 40.540 | 48.472 | -25.528 | 74.000 | PEAK |
| 4 | * | 12110.000 | 11.276 | 40.420 | 51.696 | -22.304 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:21** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH3** |

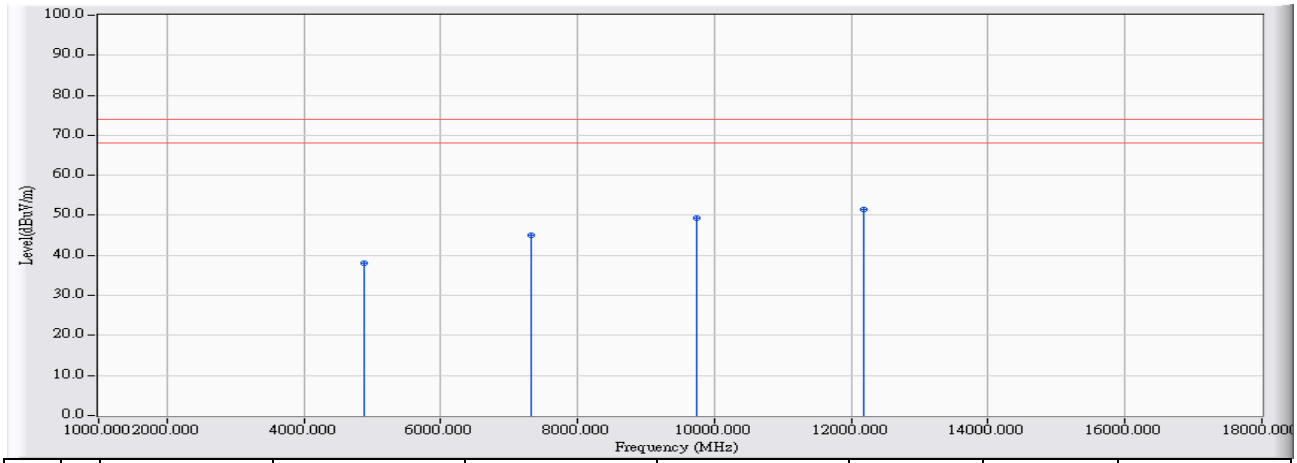



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4844.000 | -1.905 | 40.134 | 38.229 | -35.771 | 74.000 | PEAK |
| 2 | | 7266.000 | 4.243 | 40.560 | 44.803 | -29.197 | 74.000 | PEAK |
| 3 | | 9688.000 | 7.932 | 41.404 | 49.336 | -24.664 | 74.000 | PEAK |
| 4 | * | 12110.000 | 11.276 | 40.076 | 51.352 | -22.648 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:18** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH6** |

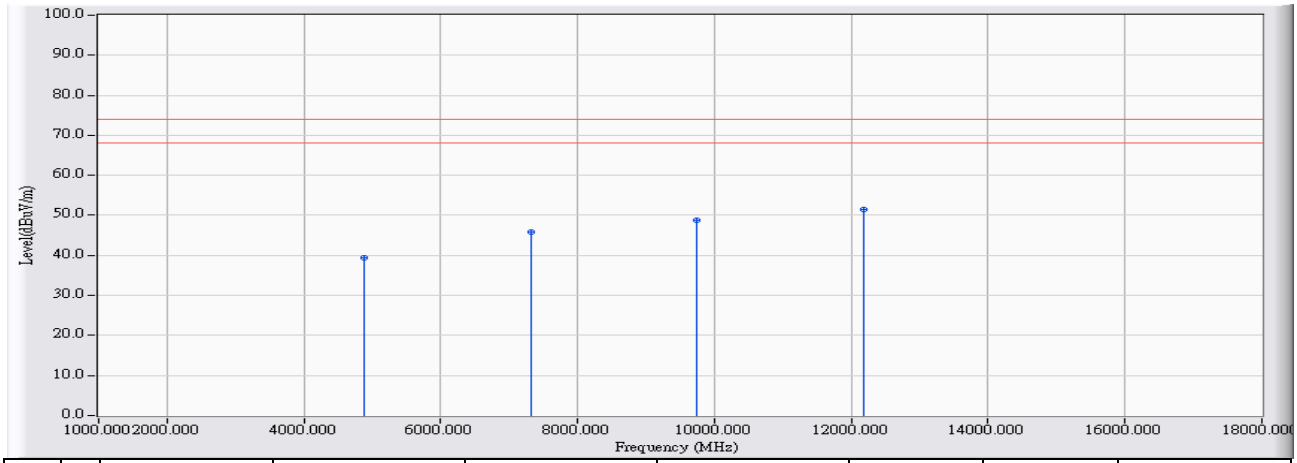



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 39.970 | 38.175 | -35.825 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 40.670 | 45.019 | -28.981 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 41.268 | 49.235 | -24.765 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.150 | 51.432 | -22.568 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:16** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH6** |

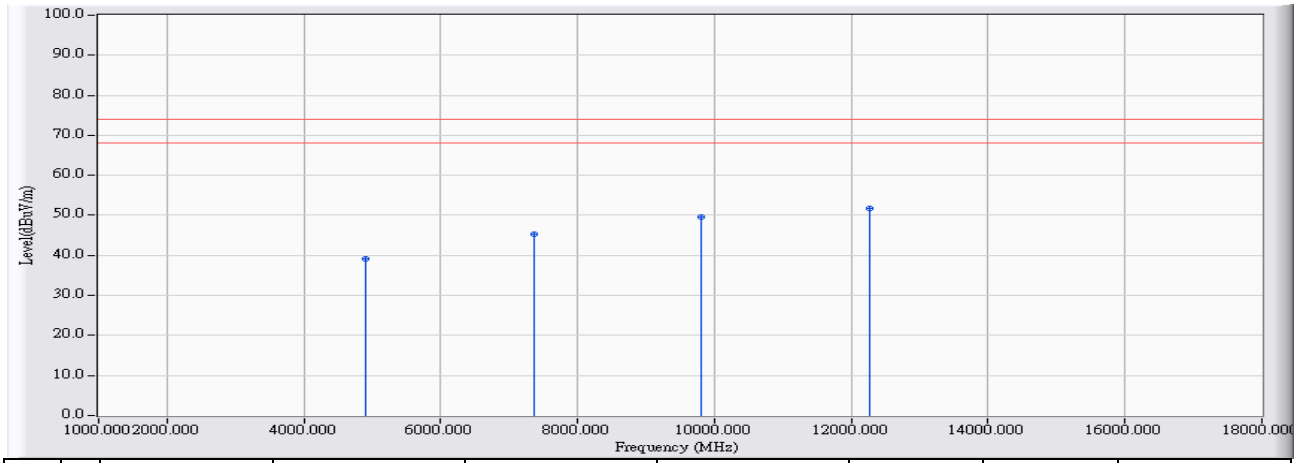



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4874.000 | -1.795 | 41.145 | 39.350 | -34.650 | 74.000 | PEAK |
| 2 | | 7311.000 | 4.349 | 41.550 | 45.899 | -28.101 | 74.000 | PEAK |
| 3 | | 9748.000 | 7.967 | 40.745 | 48.712 | -25.288 | 74.000 | PEAK |
| 4 | * | 12185.000 | 11.282 | 40.150 | 51.432 | -22.568 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:13** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH9** |

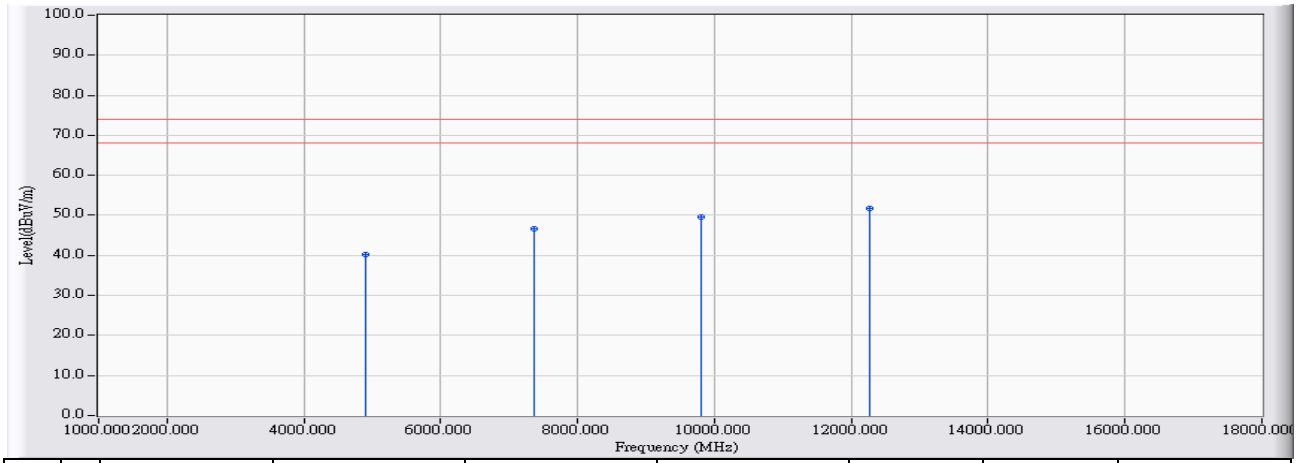



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4904.000 | -1.685 | 40.820 | 39.135 | -34.865 | 74.000 | PEAK |
| 2 | | 7356.000 | 4.454 | 40.790 | 45.244 | -28.756 | 74.000 | PEAK |
| 3 | | 9808.000 | 8.002 | 41.690 | 49.692 | -24.308 | 74.000 | PEAK |
| 4 | * | 12260.000 | 11.288 | 40.554 | 51.842 | -22.158 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/12 - 15:15** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : 802.11n40 CH9** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 4904.000 | -1.685 | 41.980 | 40.295 | -33.705 | 74.000 | PEAK |
| 2 | | 7356.000 | 4.454 | 42.124 | 46.578 | -27.422 | 74.000 | PEAK |
| 3 | | 9808.000 | 8.002 | 41.542 | 49.544 | -24.456 | 74.000 | PEAK |
| 4 | * | 12260.000 | 11.288 | 40.540 | 51.828 | -22.172 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

# 5. RF antenna conducted test

## 5.1. Test Equipment

The following test equipments are used during the test:

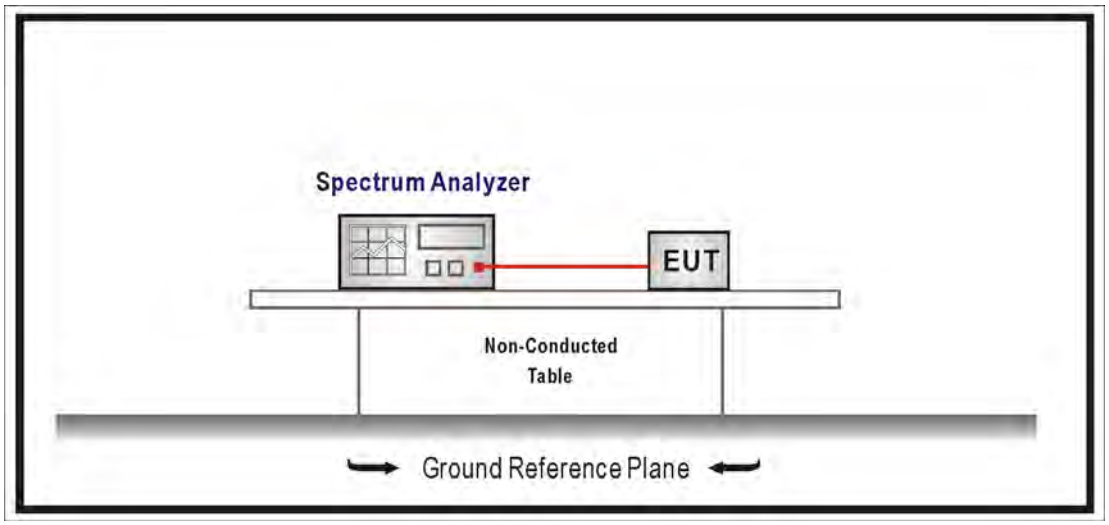
**RF antenna conducted test / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9010A-EXA | US47140172 | 2014/08/05 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 5.2. Test Setup

RF Antenna Conducted Measurement:



## 5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

## 5.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements
Set RBW = 100 kHz, Set VBW≧3xRBW, scan up through 10th harmonic.

## 5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

## 5.6. Uncertainty

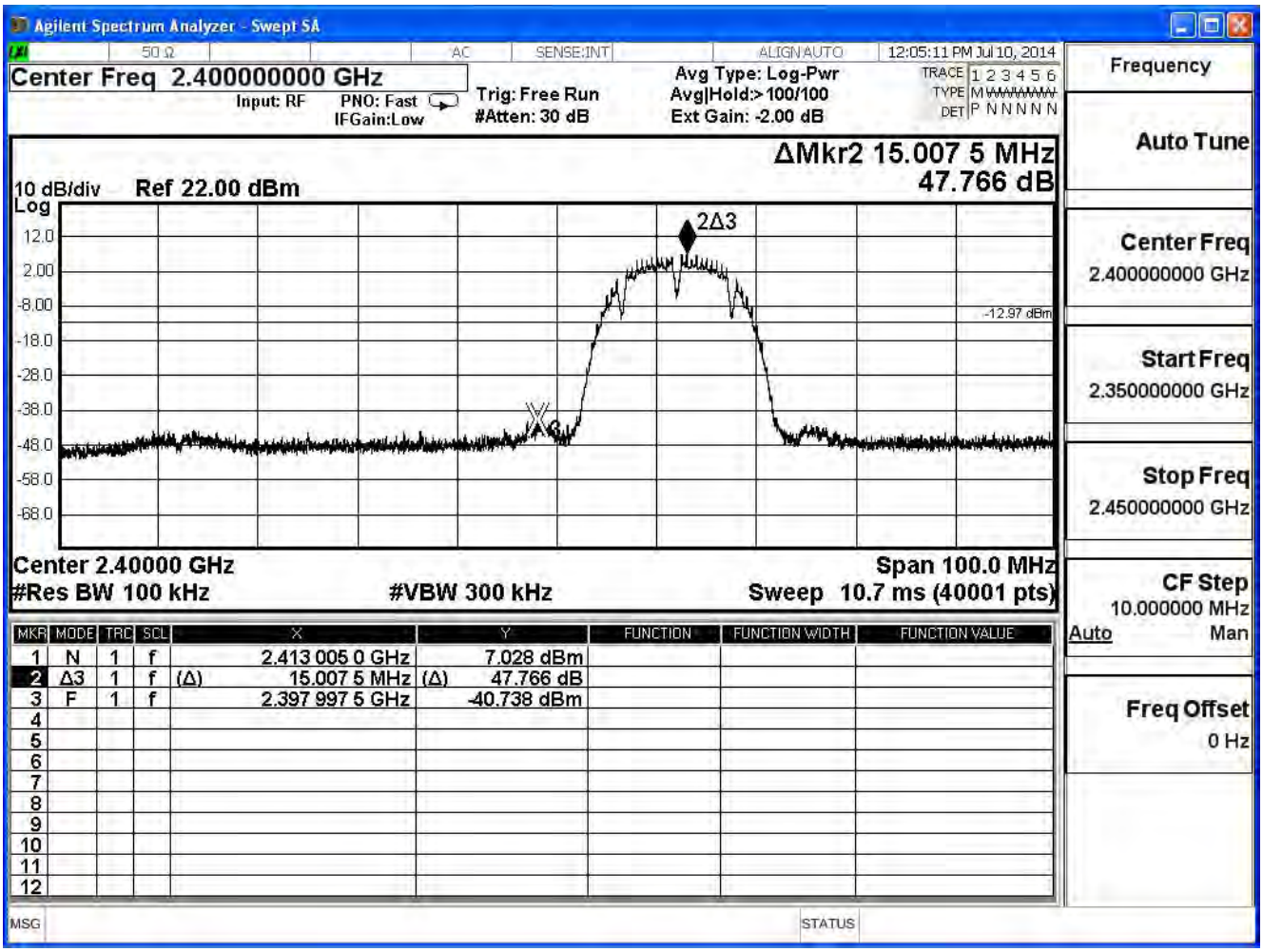
Conducted is defined as ± 1.27dB

## 5.7. Test Result

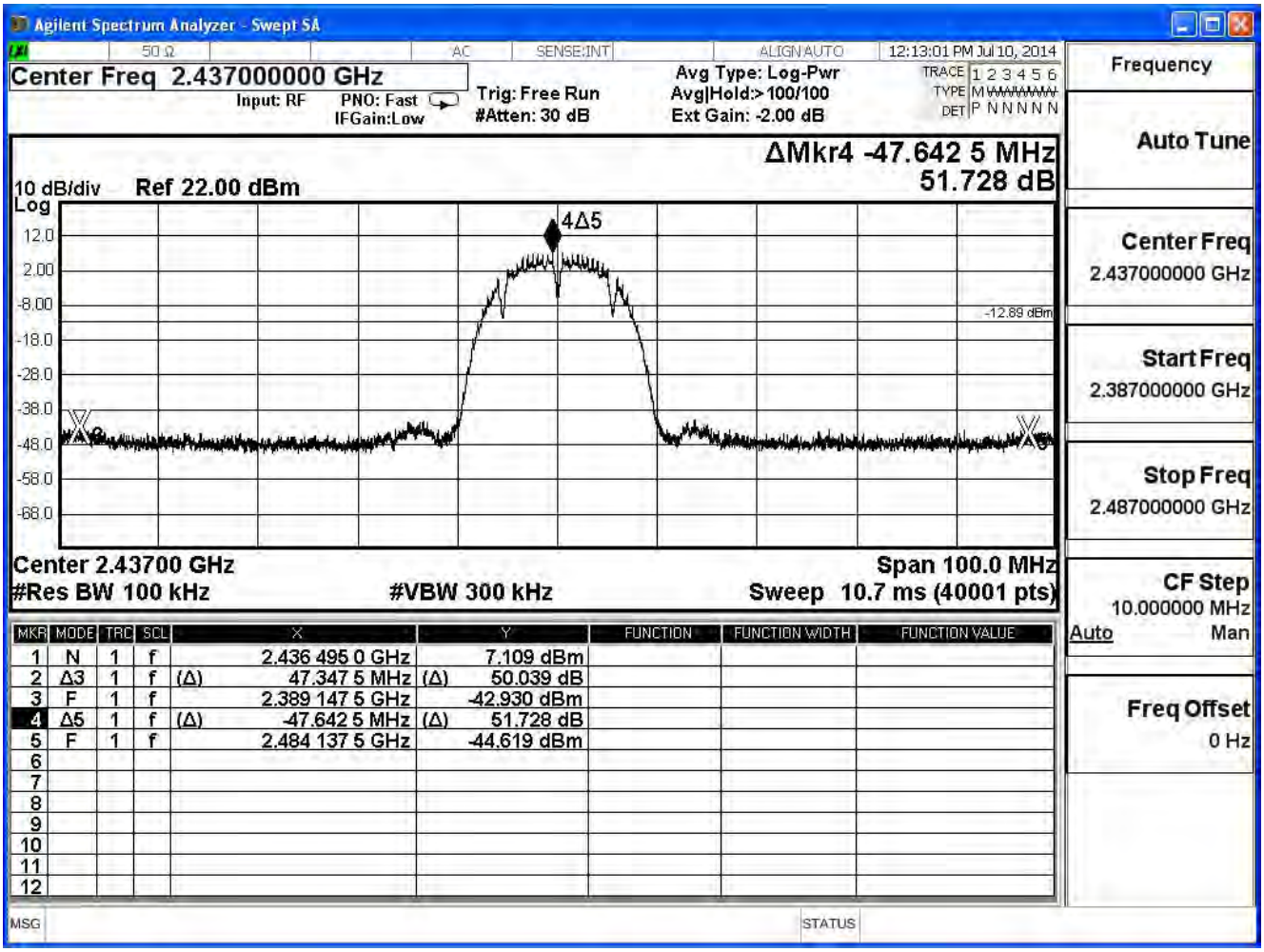
| Product | Wireless Ceiling Access Point | | |
|---|---|---|---|
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11b, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 1 | 2412 | 47.766 | ≧20 | Pass |
| 6 | 2437 | 50.039 | ≧20 | Pass |
| 11 | 2462 | 51.604 | ≧20 | Pass |

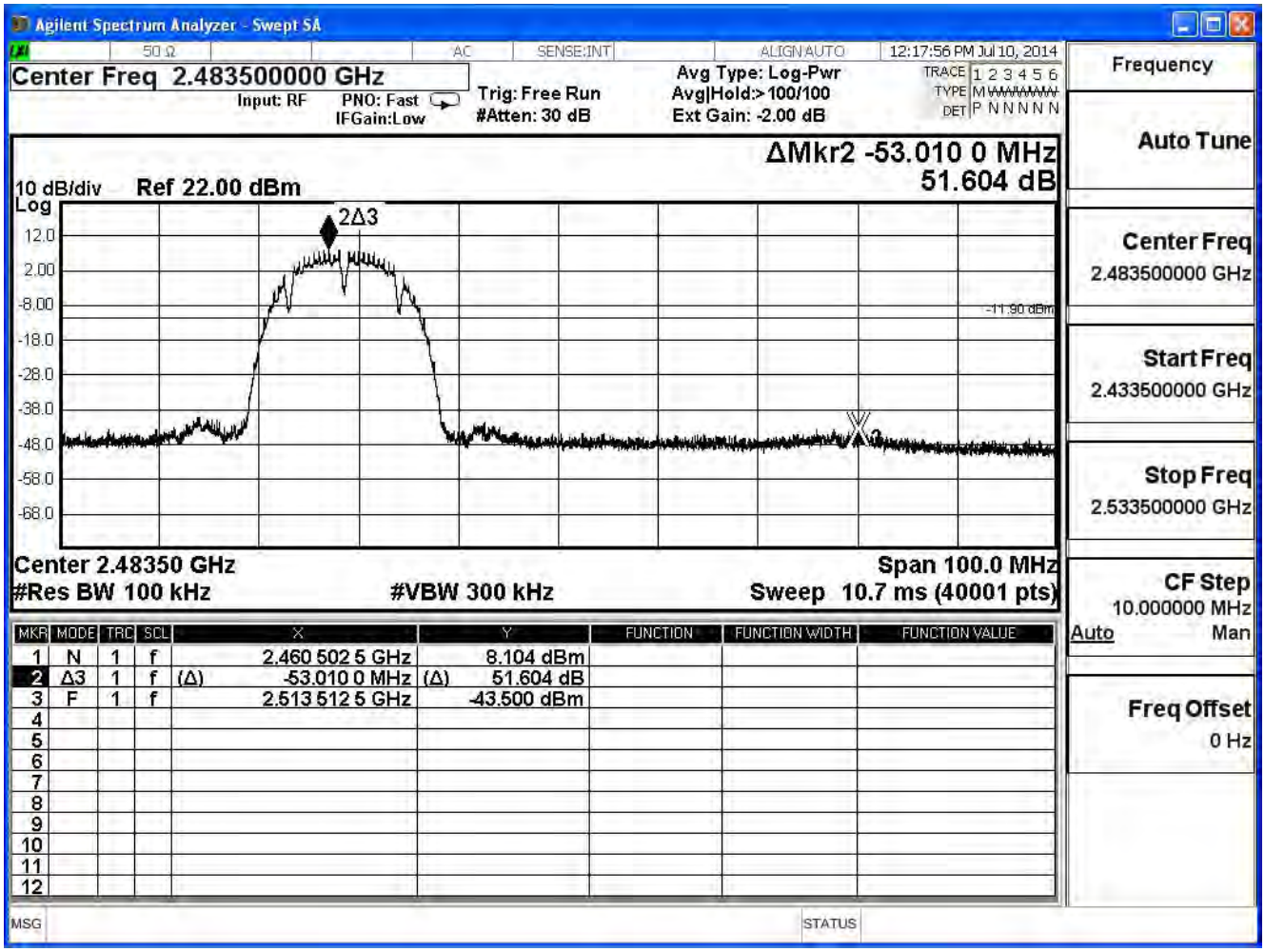
**Channel 01 (2412MHz)**



**Channel 06 (2437MHz)**



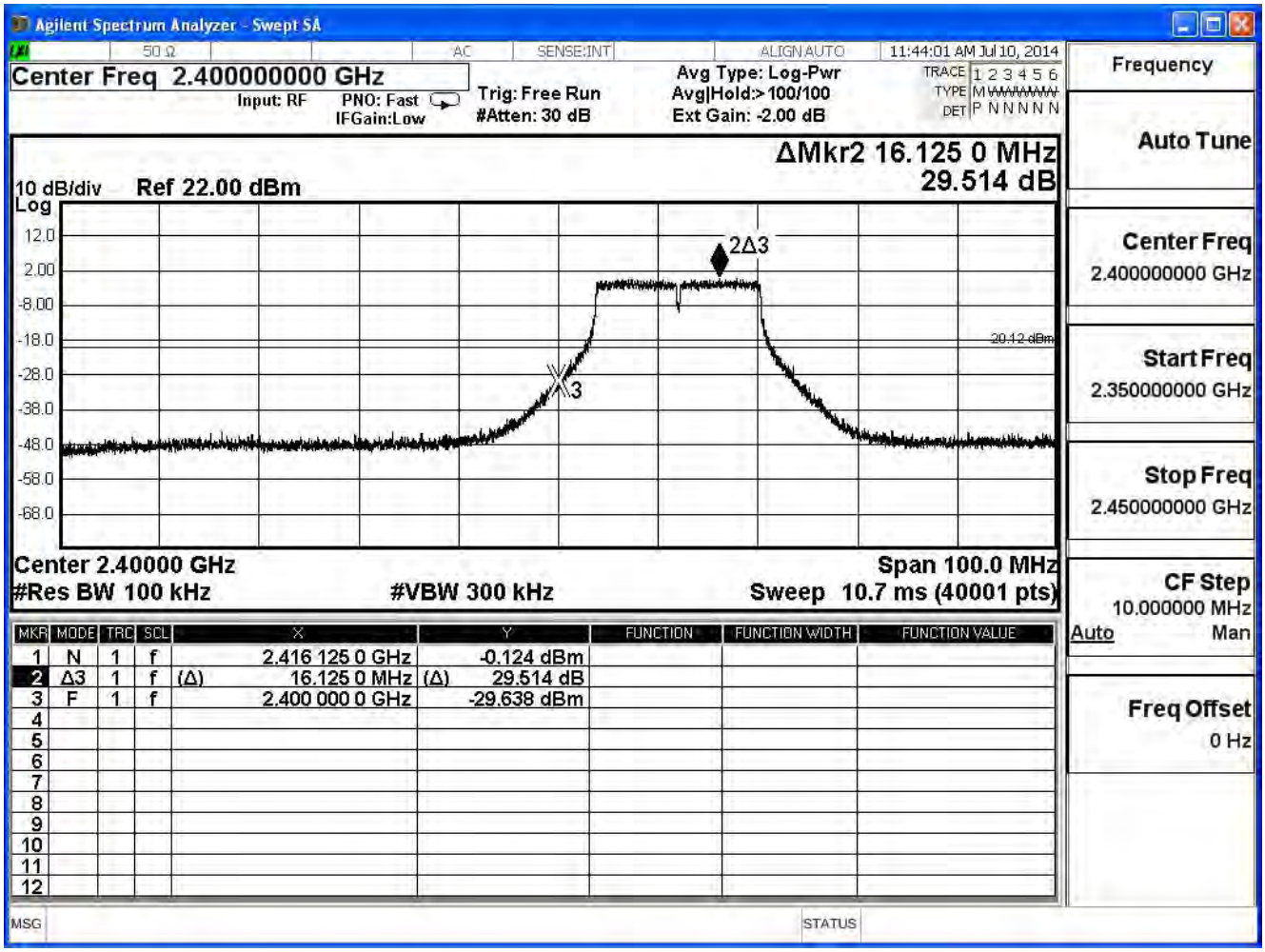
**Channel 11 (2462MHz)**



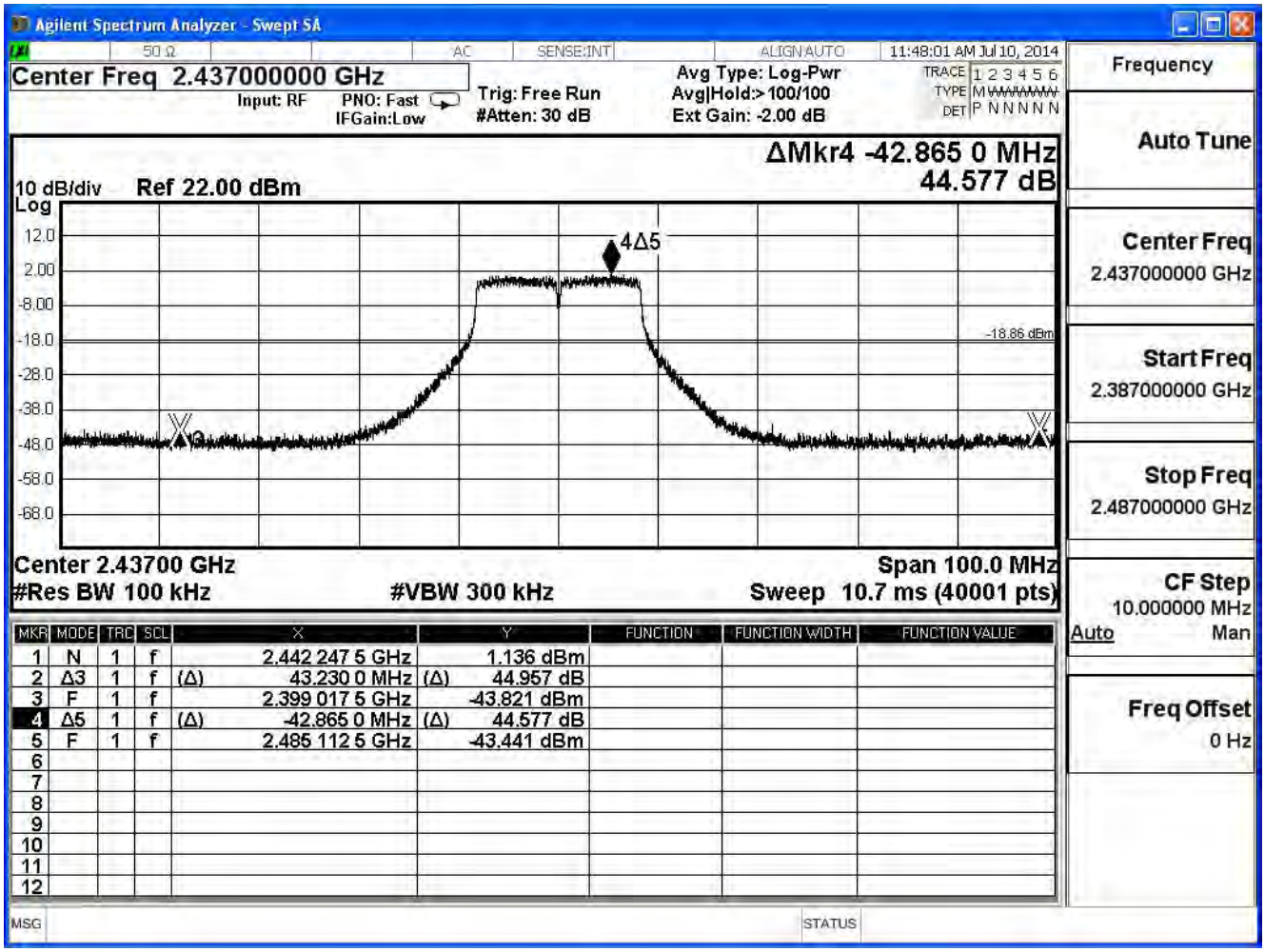
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11g, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 1 | 2412 | 29.514 | ≧20 | Pass |
| 6 | 2437 | 44.577 | ≧20 | Pass |
| 11 | 2462 | 46.459 | ≧20 | Pass |

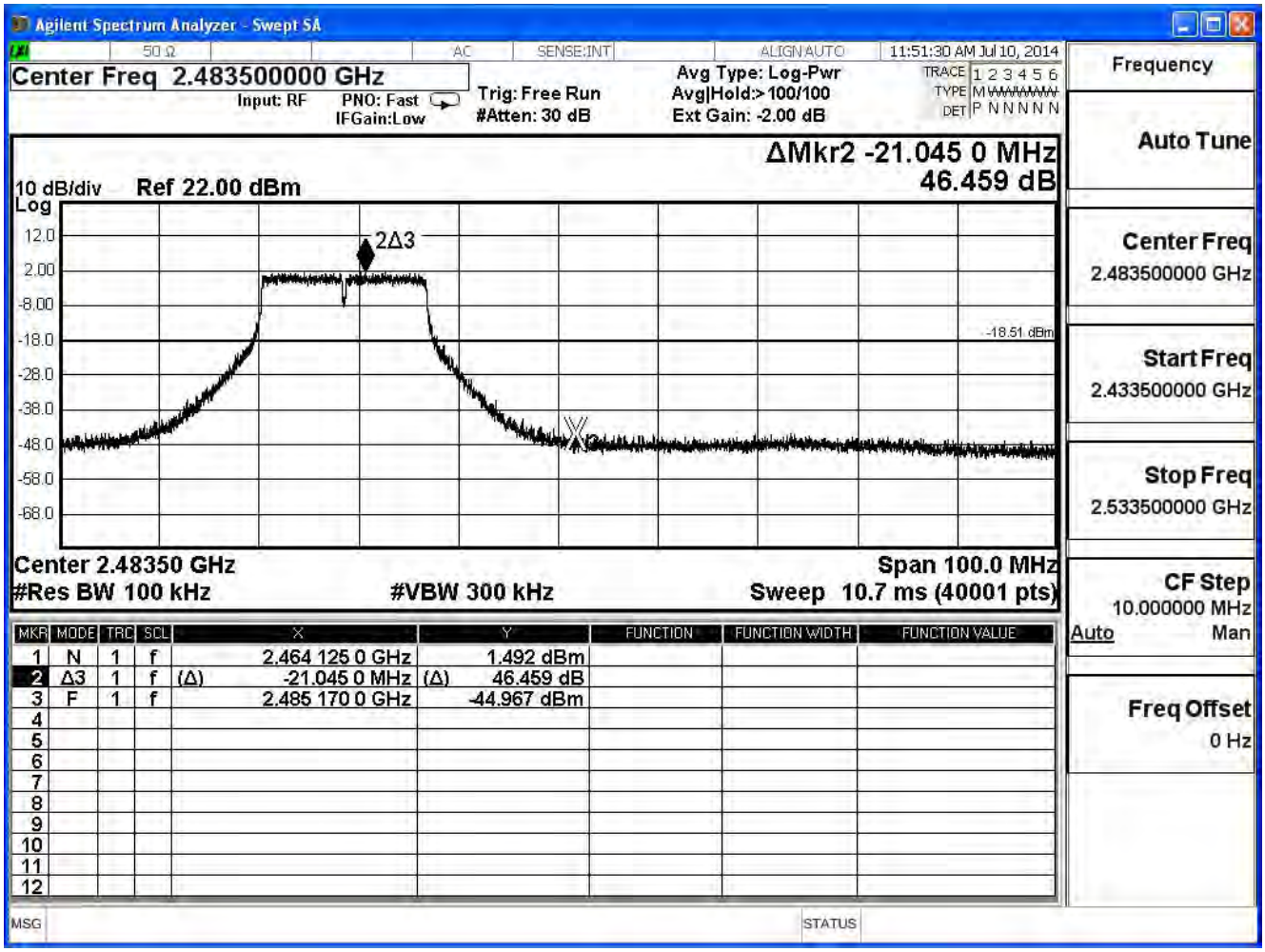
**Channel 01 (2412MHz)**



**Channel 06 (2437MHz)**



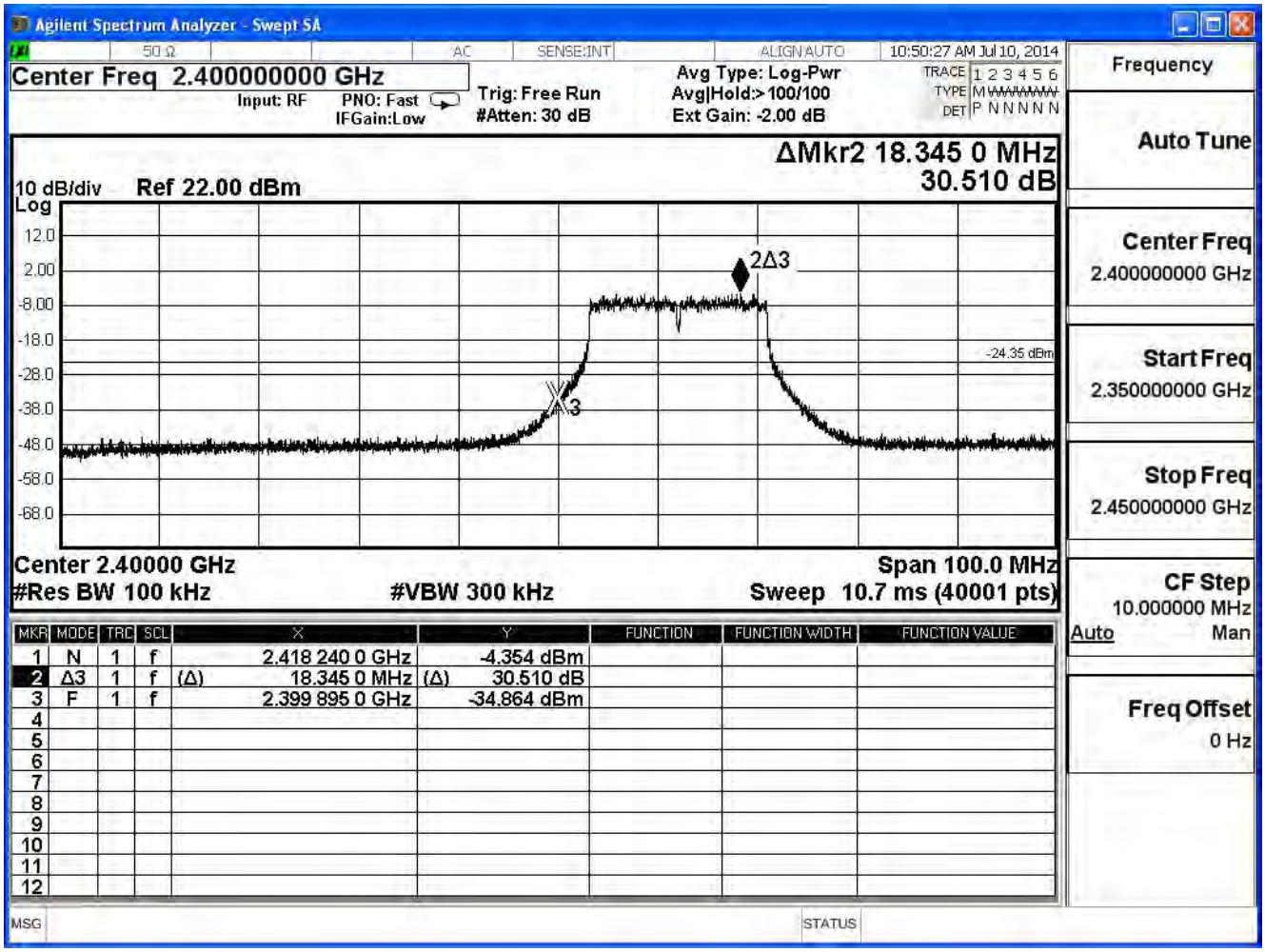
**Channel 11 (2462MHz)**



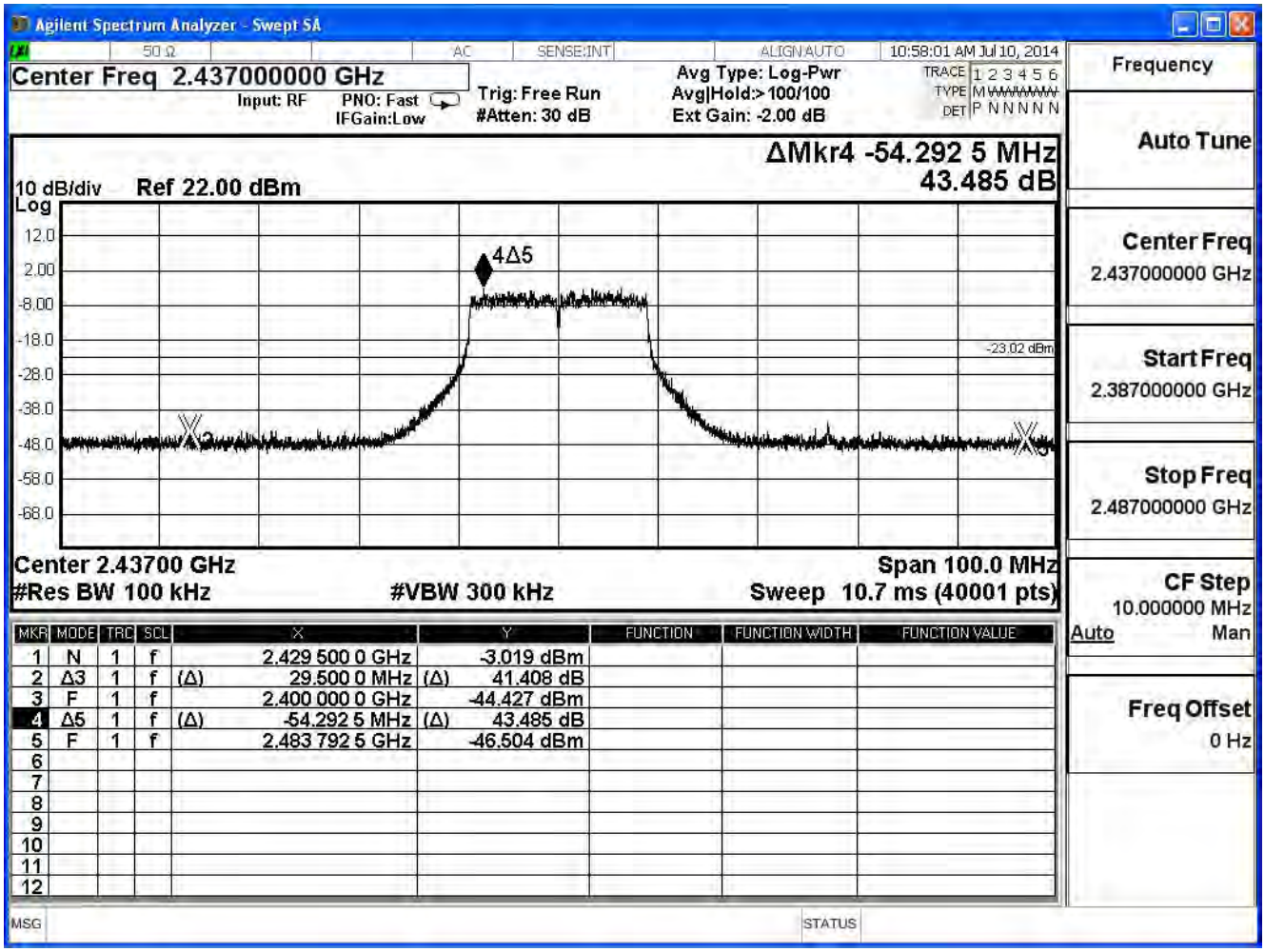
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (20MHz), ANT 0, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 1 | 2412 | 30.510 | ≧20 | Pass |
| 6 | 2437 | 41.408 | ≧20 | Pass |
| 11 | 2462 | 40.969 | ≧20 | Pass |

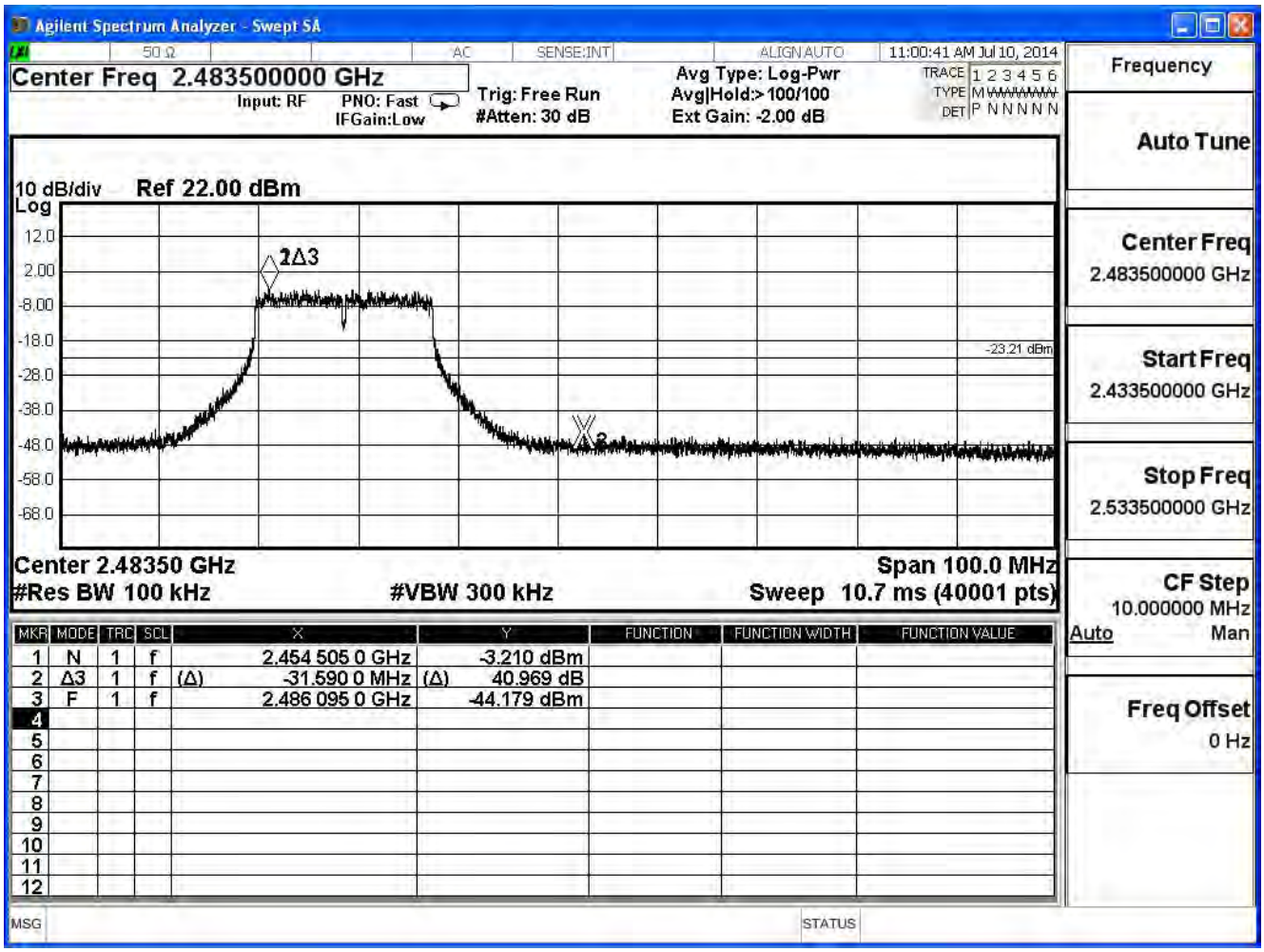
**Channel 1 (2412MHz)**



**Channel 6 (2437MHz)**



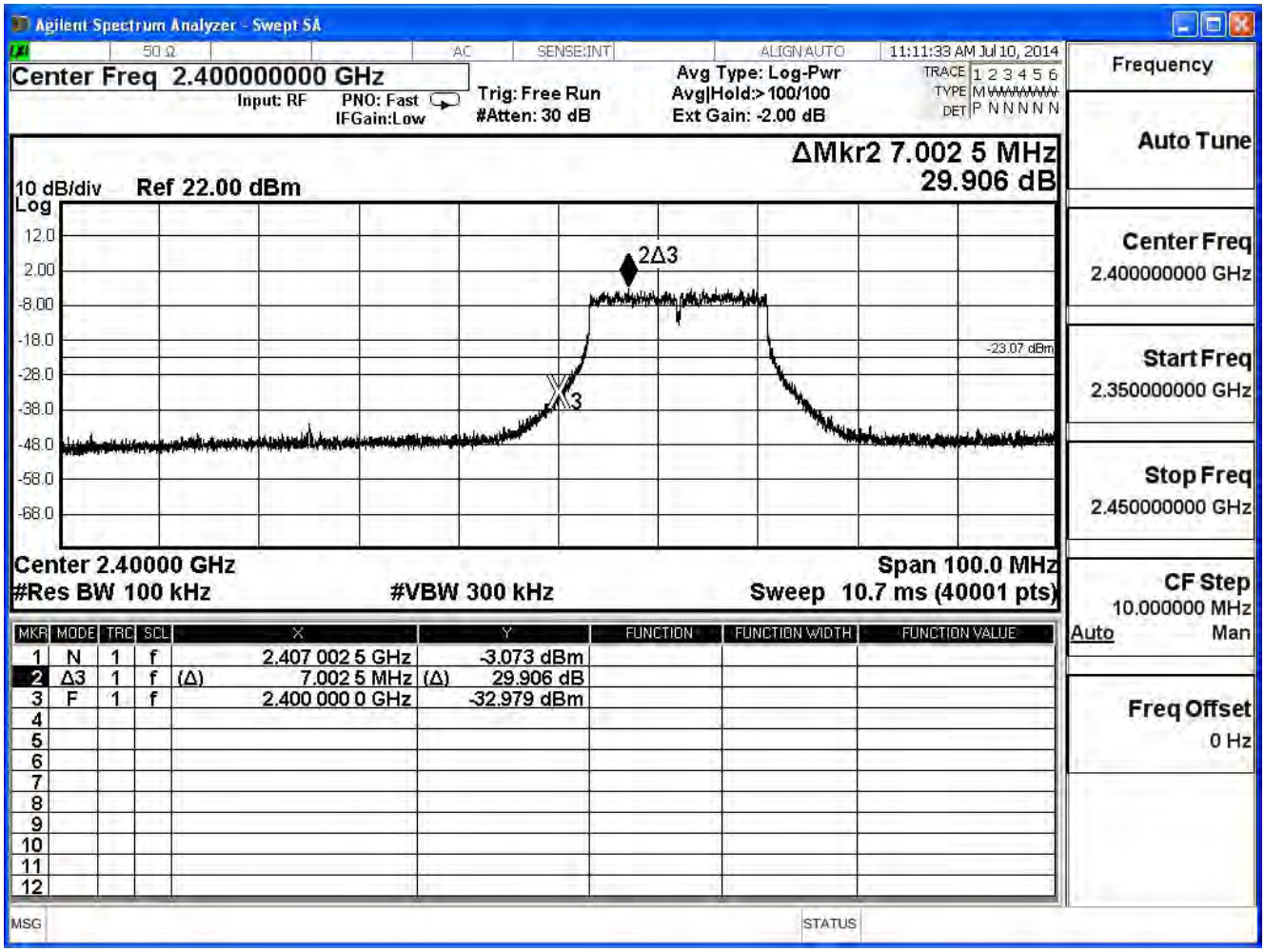
**Channel 11 (2462MHz)**



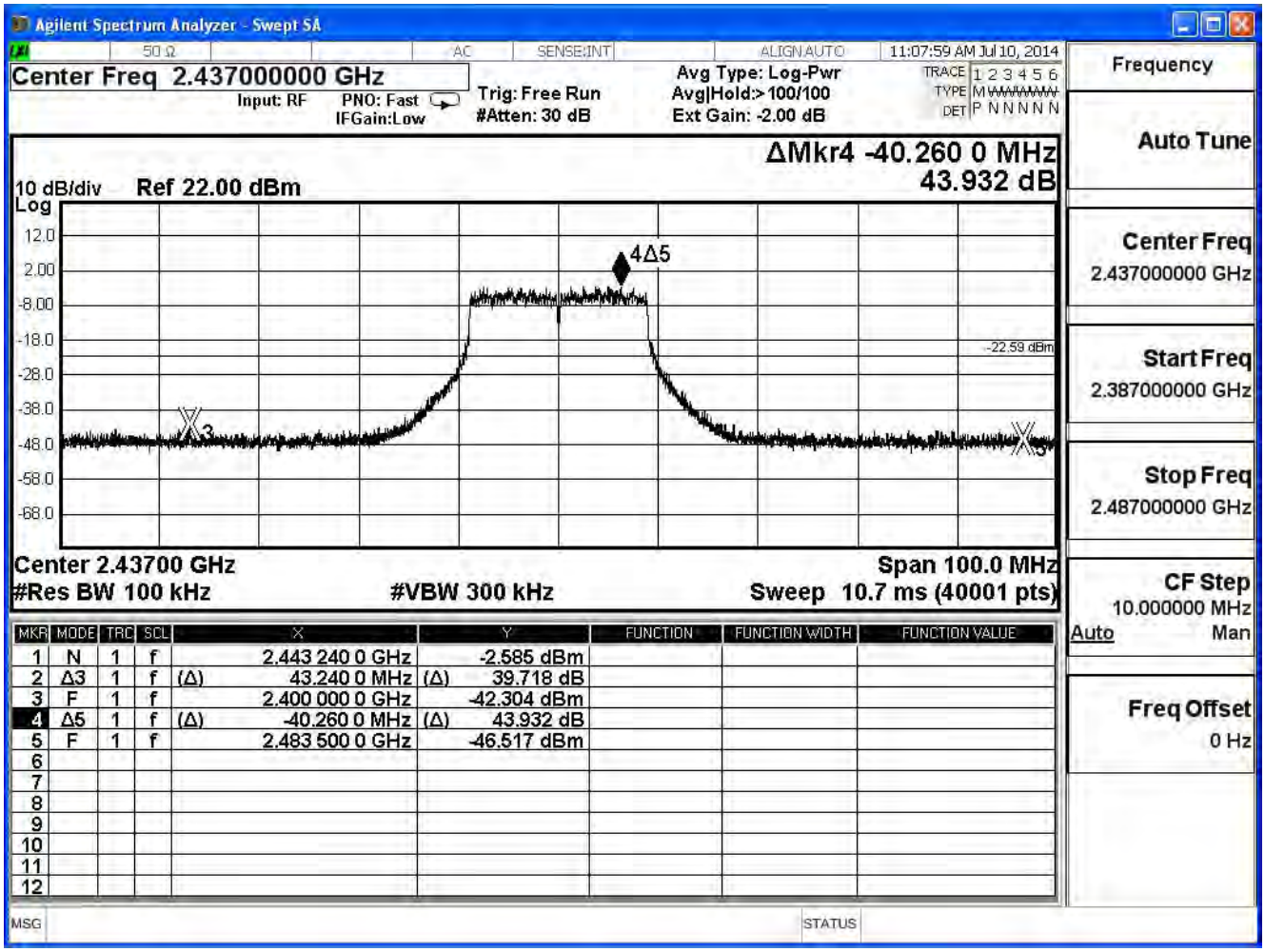
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (20MHz), ANT 1, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 1 | 2412 | 29.906 | ≧20 | Pass |
| 6 | 2437 | 39.718 | ≧20 | Pass |
| 11 | 2462 | 40.583 | ≧20 | Pass |

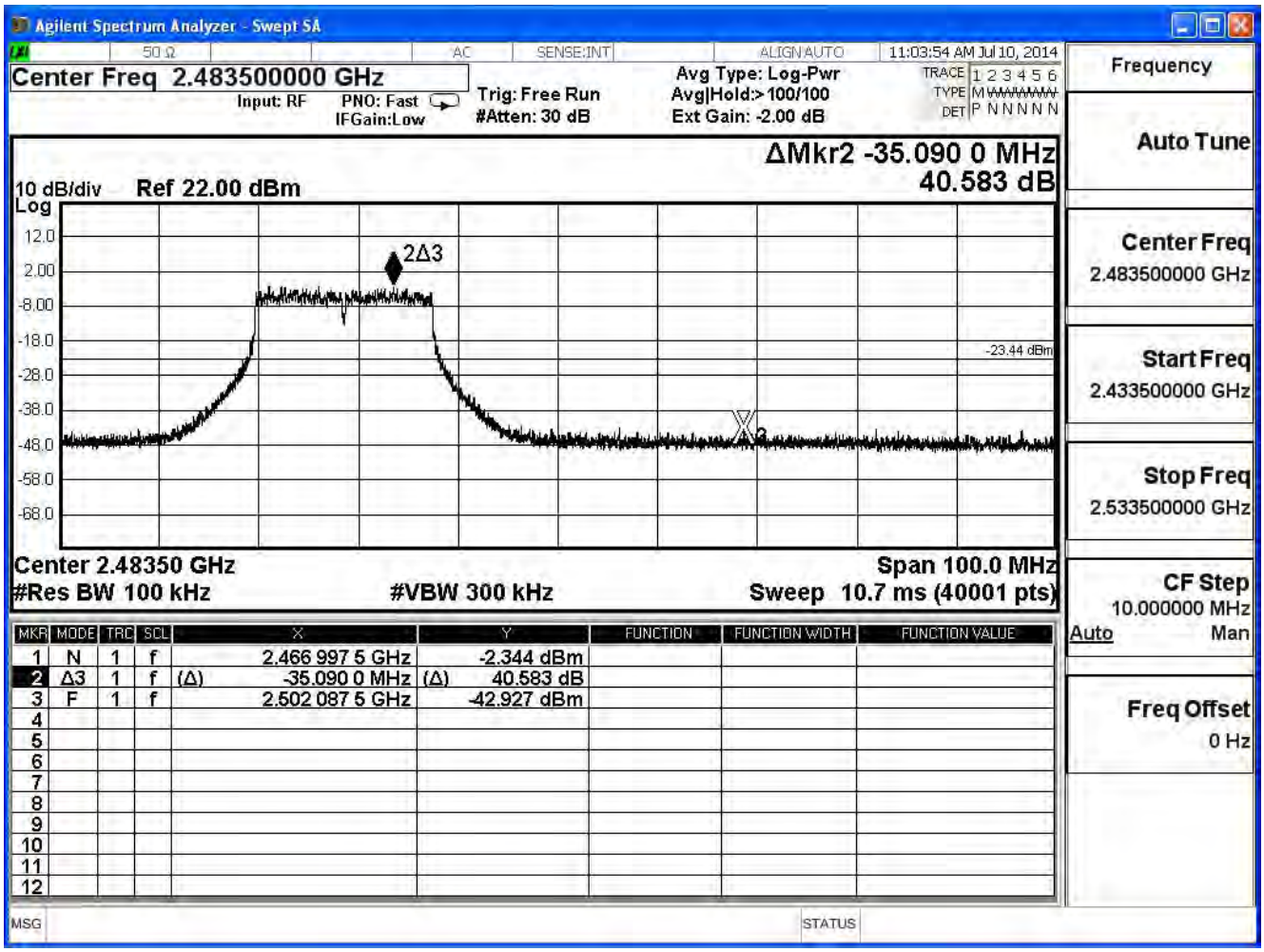
**Channel 1 (2412MHz)**



**Channel 6 (2437MHz)**



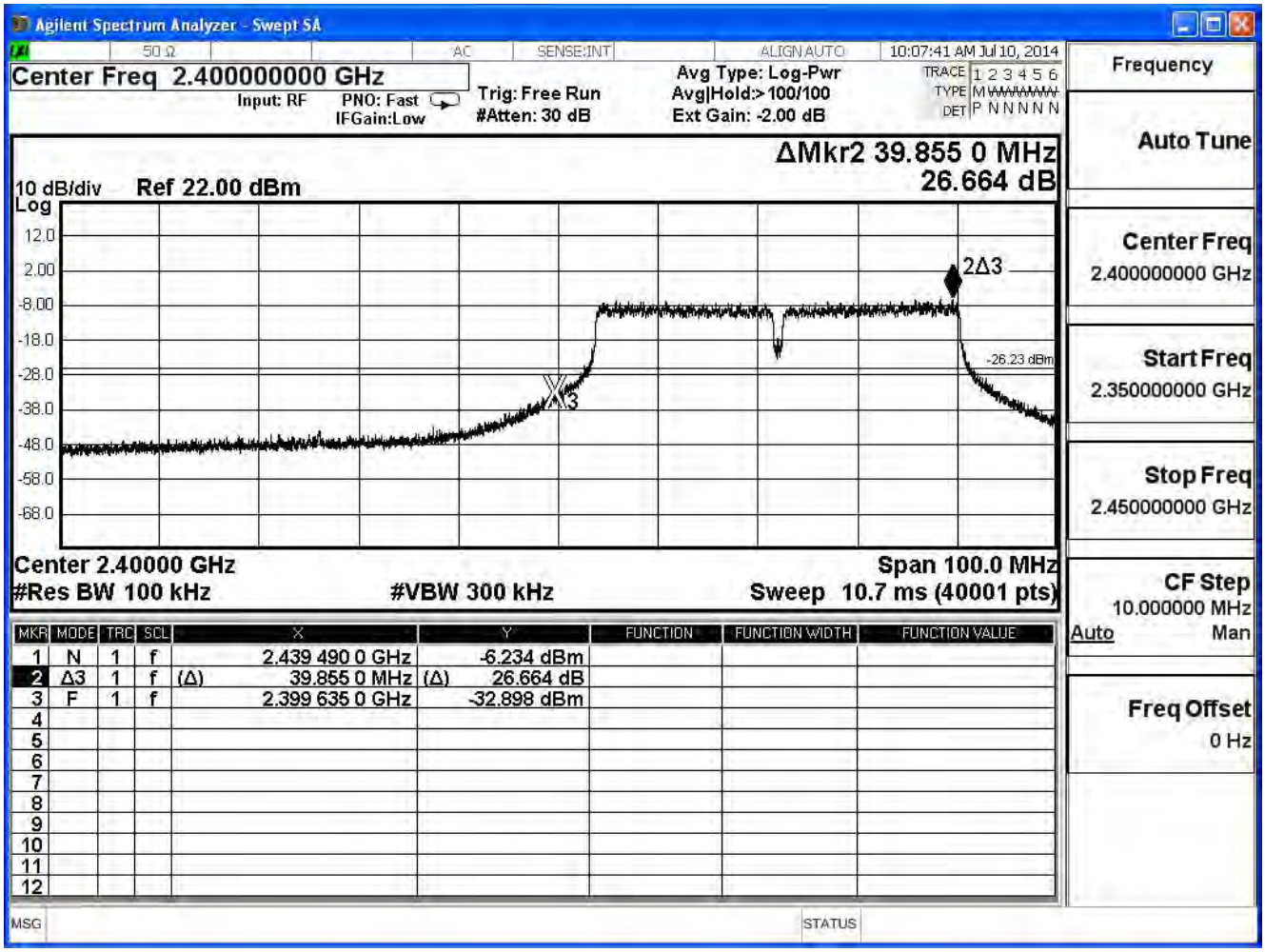
**Channel 11 (2462MHz)**



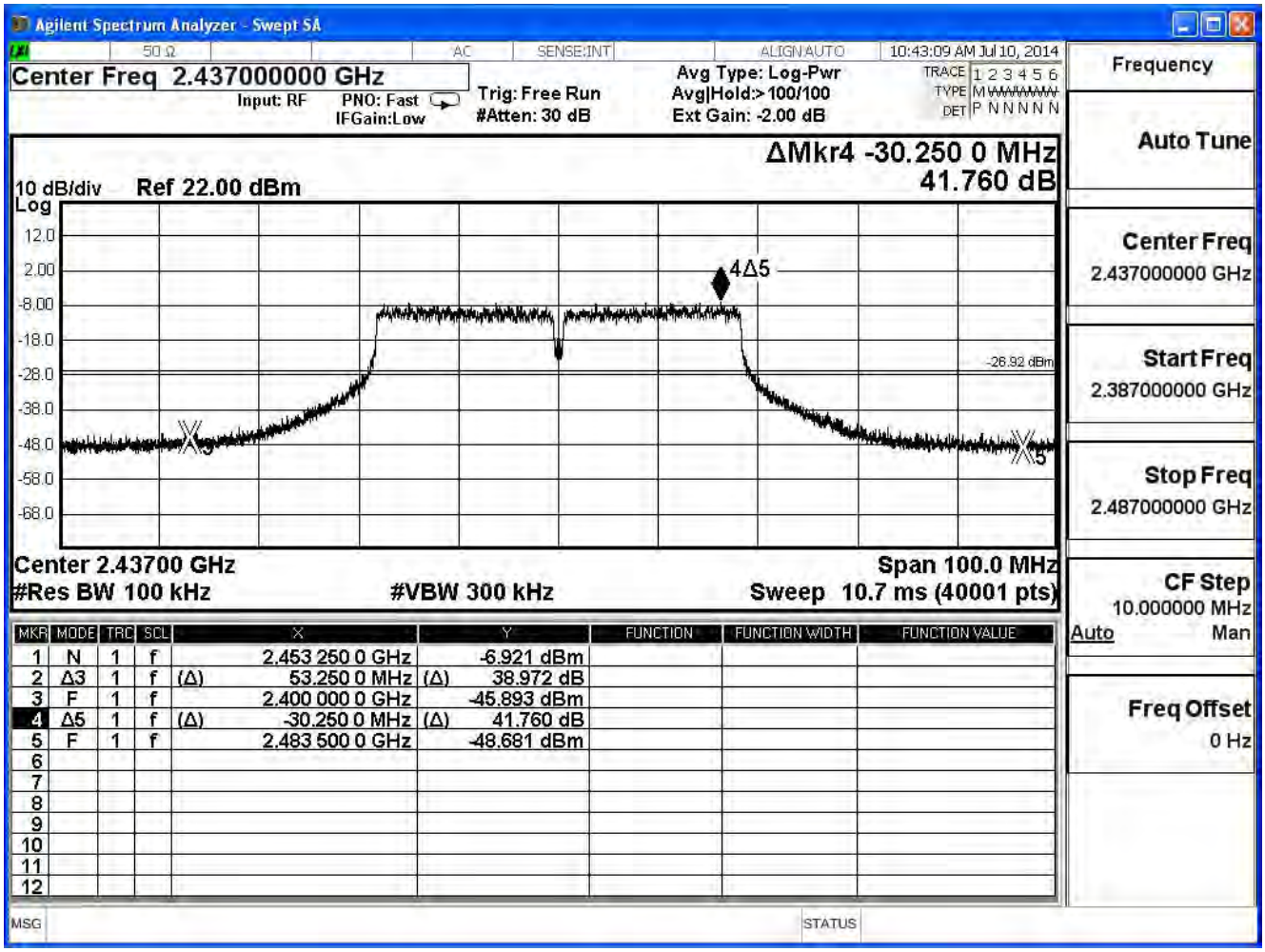
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (40MHz), ANT 0, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 3 | 2422 | 26.664 | ≧20 | Pass |
| 6 | 2437 | 38.972 | ≧20 | Pass |
| 9 | 2452 | 38.413 | ≧20 | Pass |

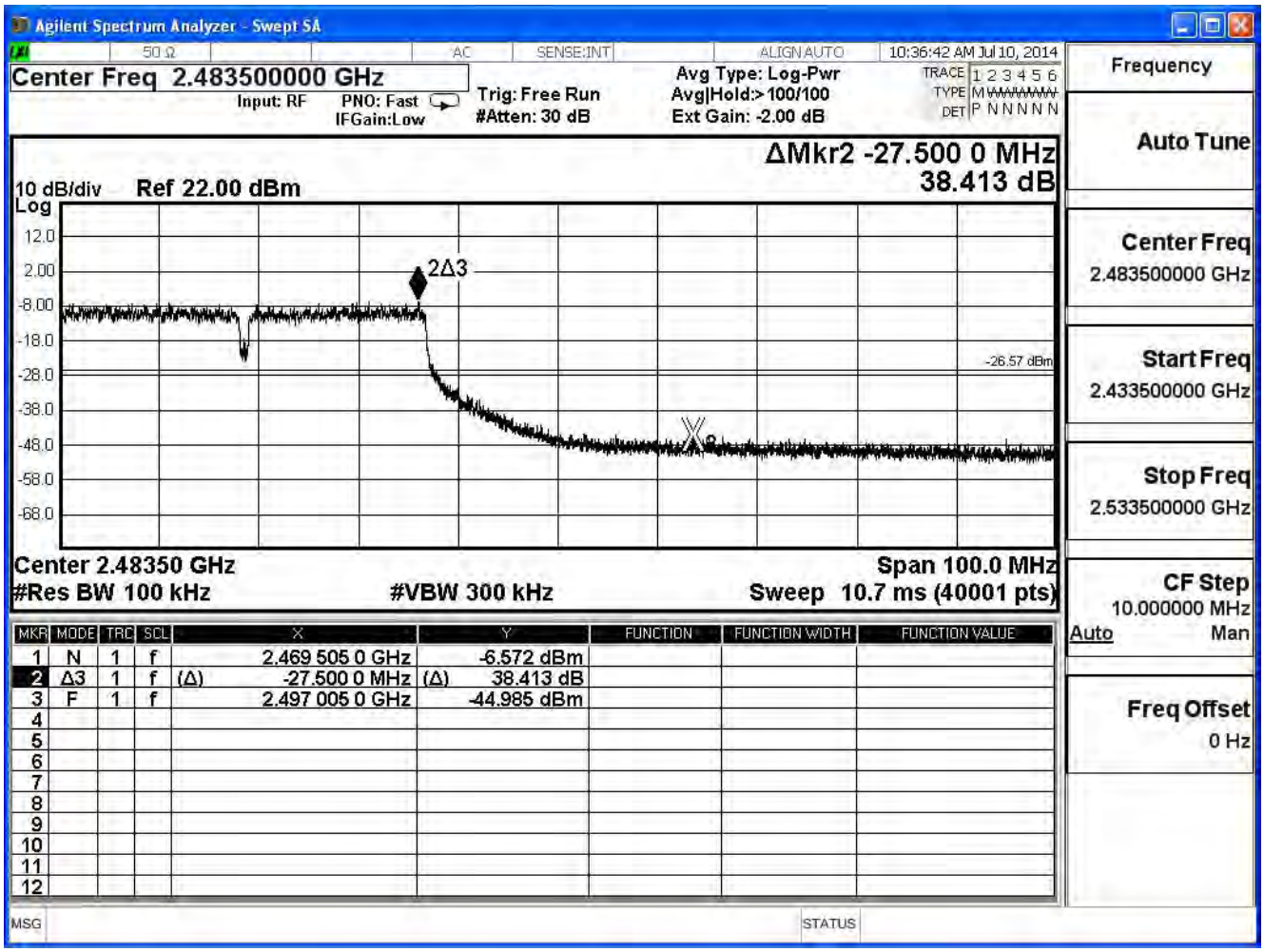
**Channel 3 (2422MHz)**



**Channel 6 (2437MHz)**



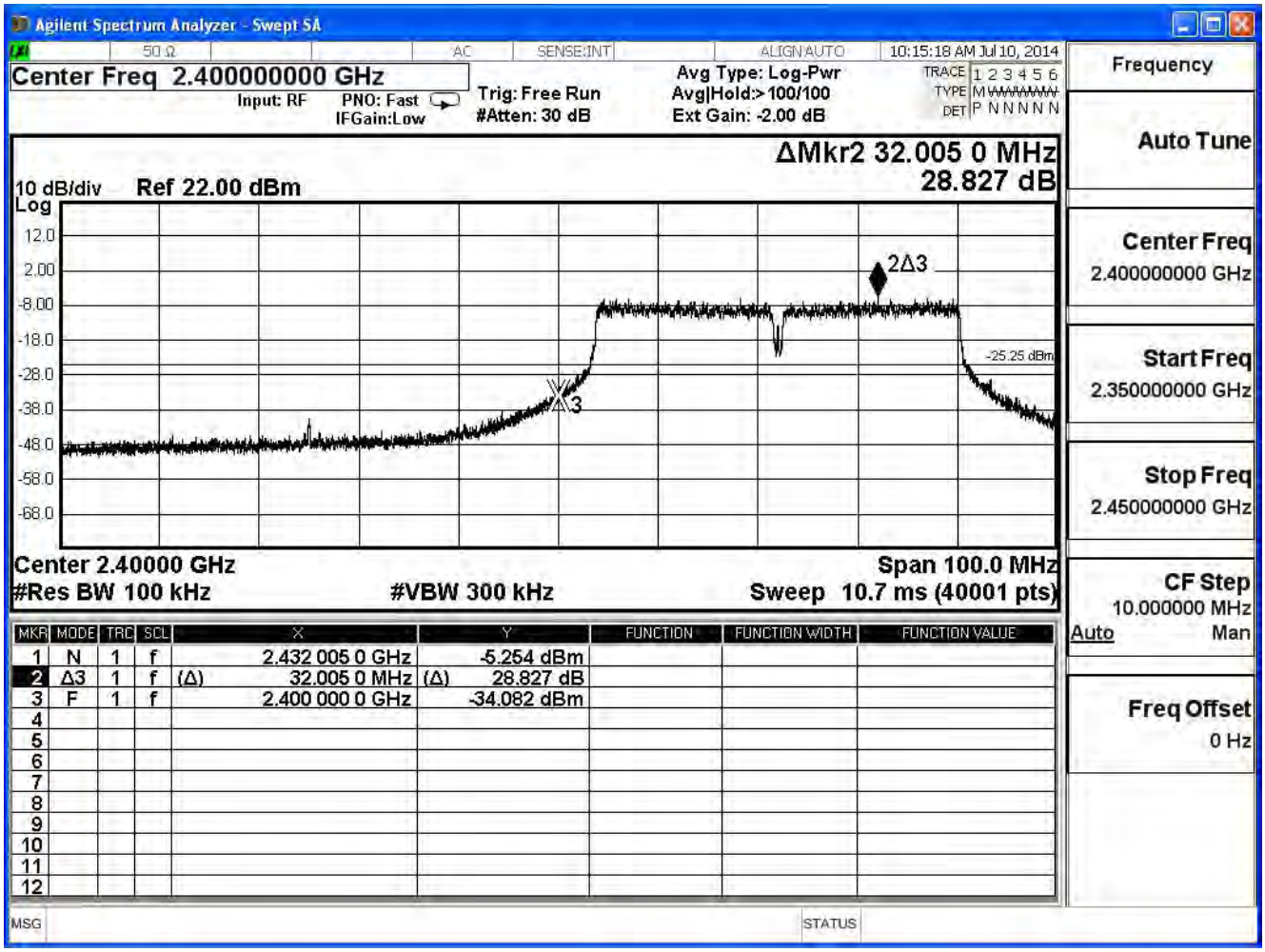
**Channel 9 (2452MHz)**



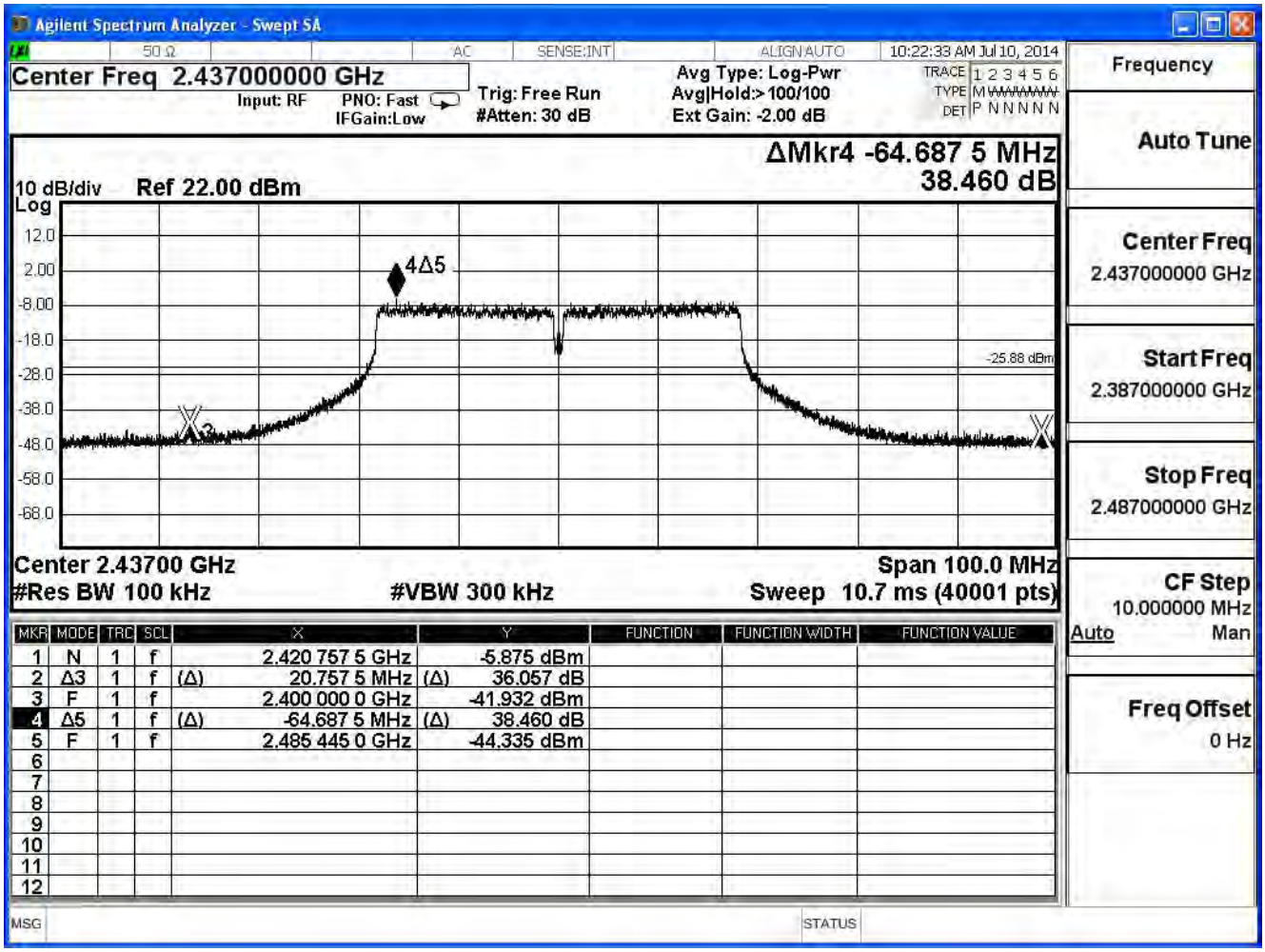
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | RF antenna conducted test | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (40MHz), ANT 1, Duty Cycle: 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level (dBc) | Limit (dBc) | Result |
| 3 | 2422 | 28.827 | ≧20 | Pass |
| 6 | 2437 | 36.057 | ≧20 | Pass |
| 9 | 2452 | 36.308 | ≧20 | Pass |

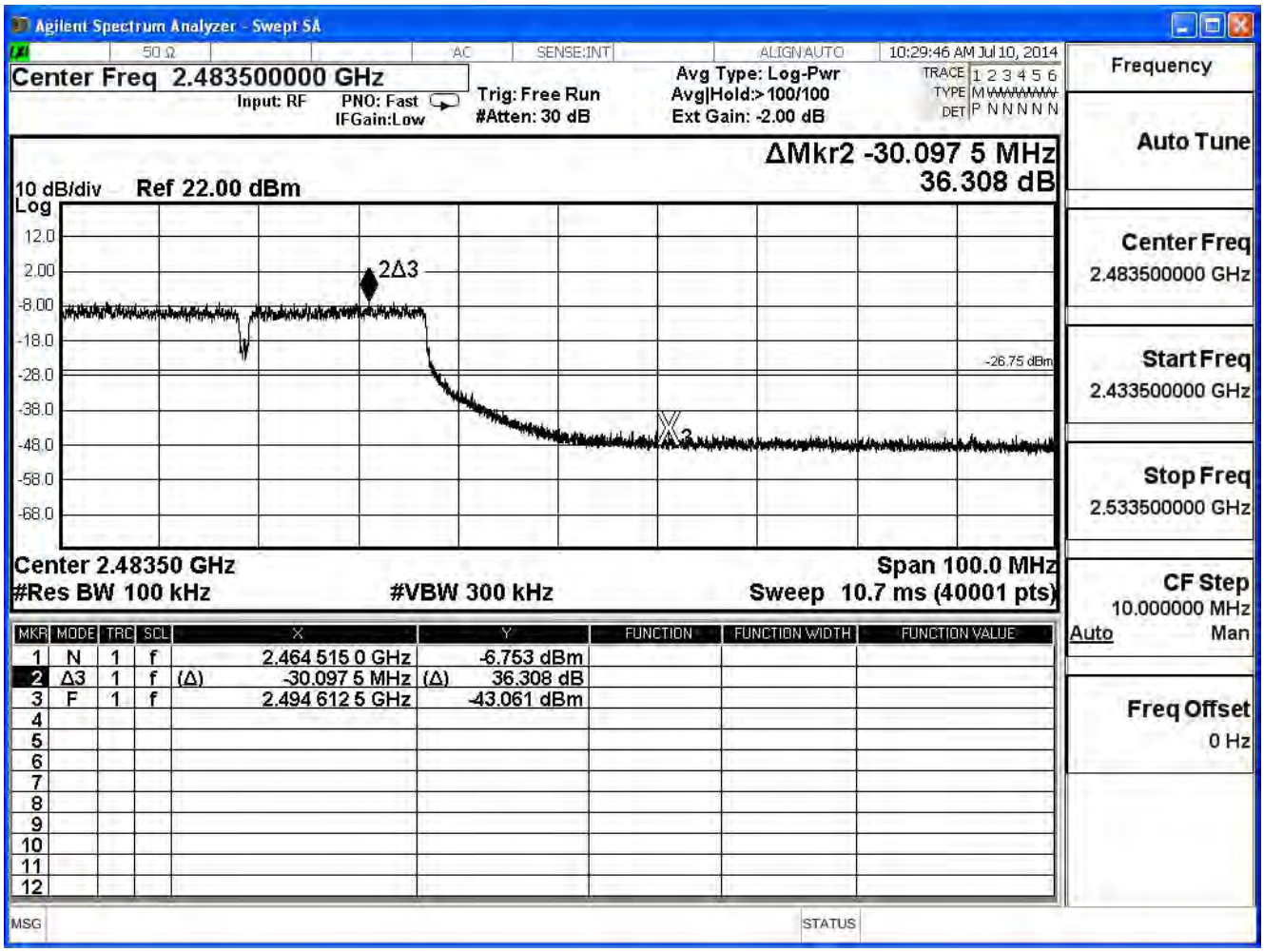
**Channel 3 (2422MHz)**



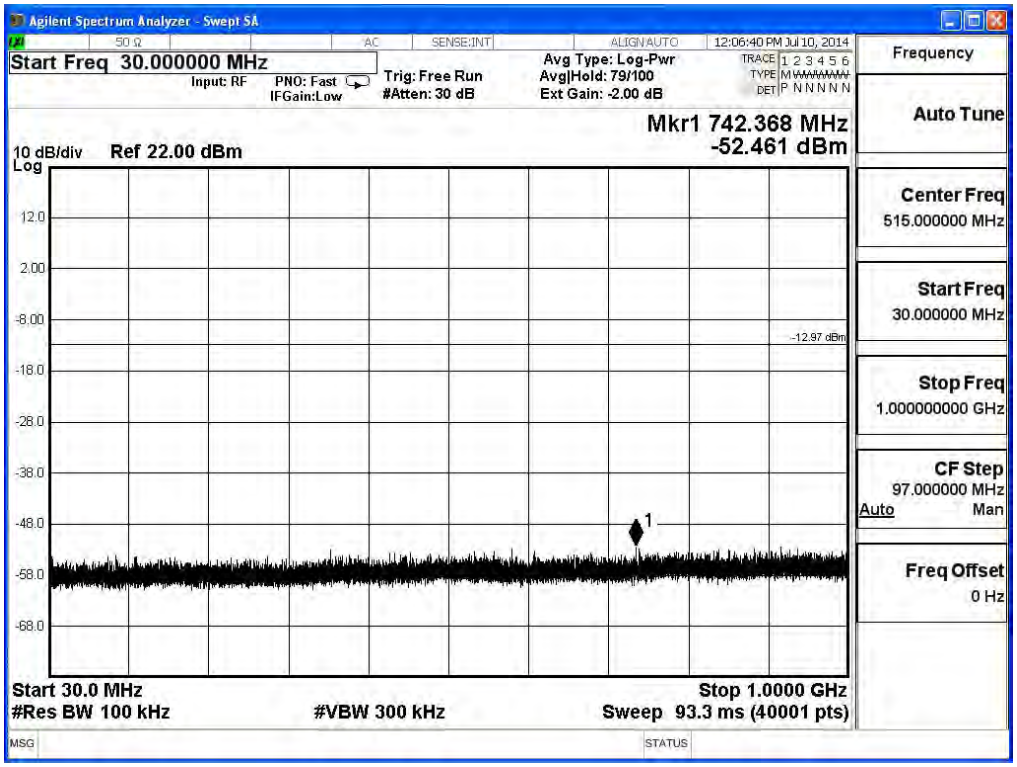
**Channel 6 (2437MHz)**



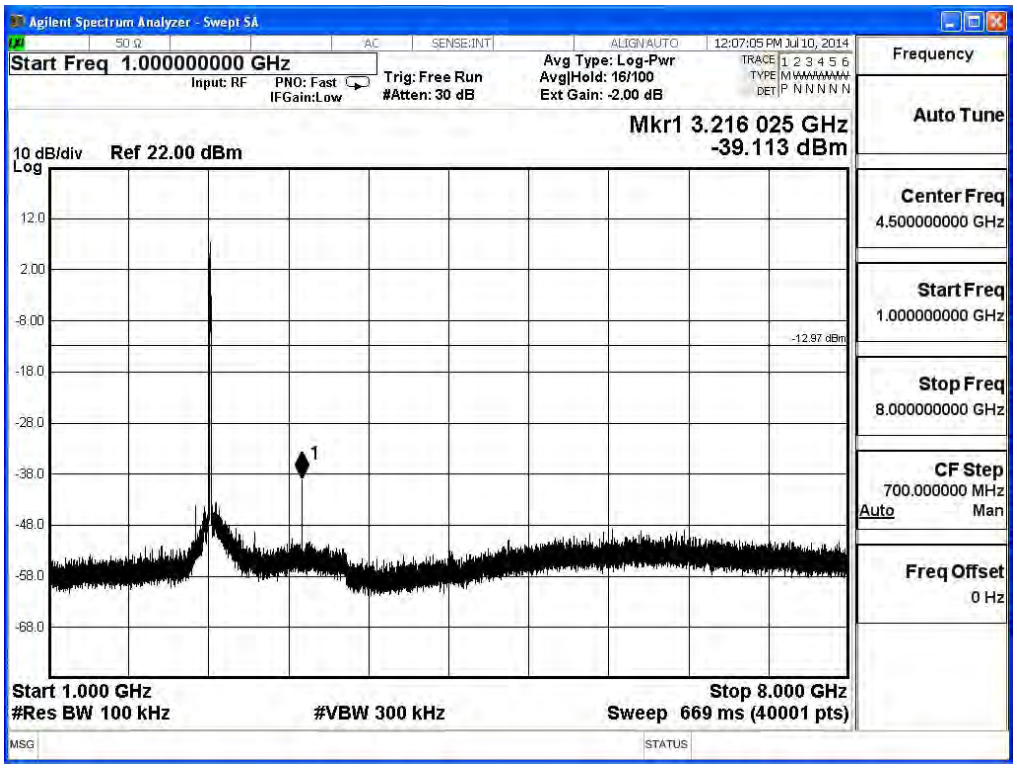
**Channel 9 (2452MHz)**



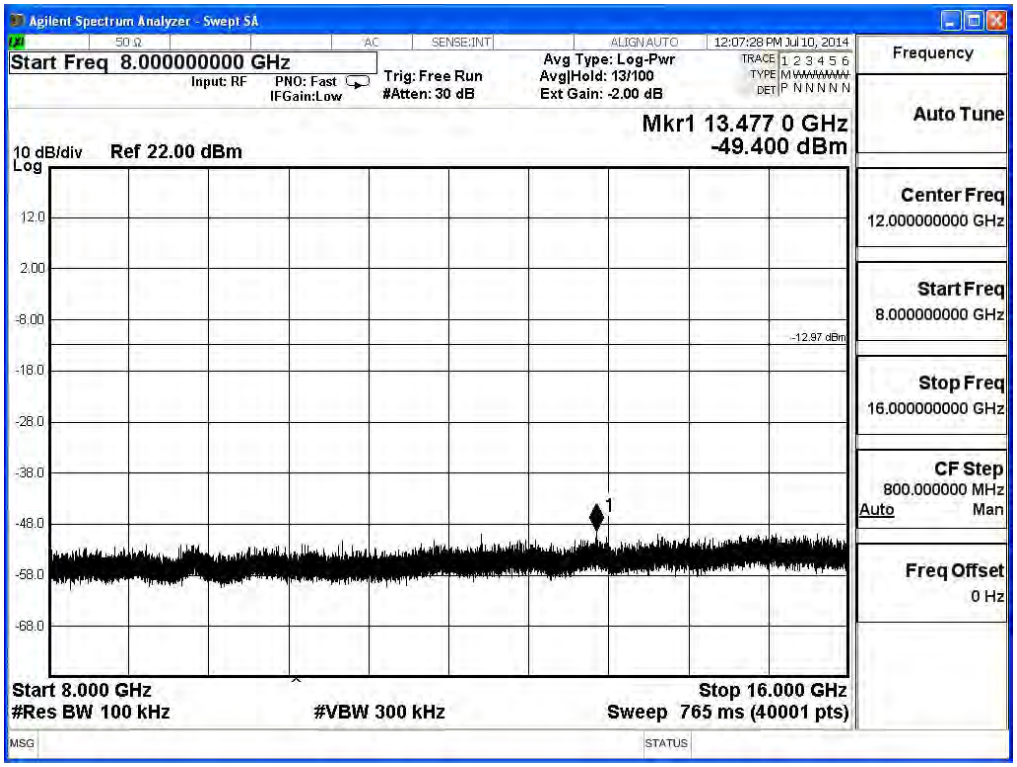
## 2412MHz (30MHz-1GHz)-802.11b



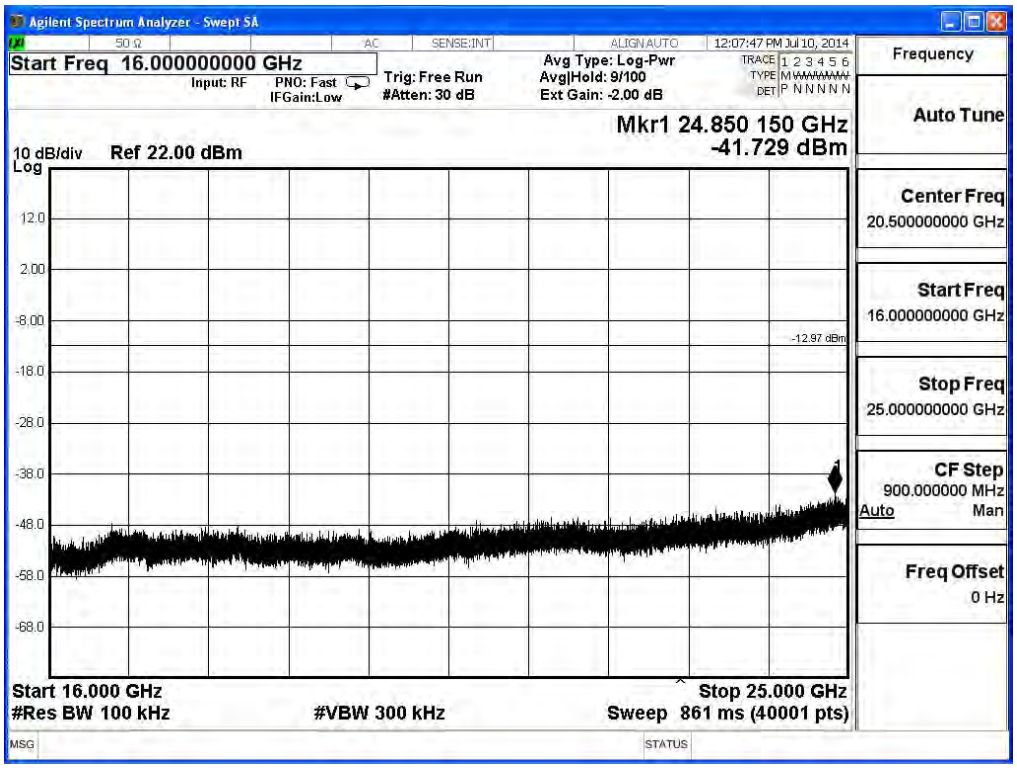

## 2412MHz (1GHz-8GHz) -802.11b



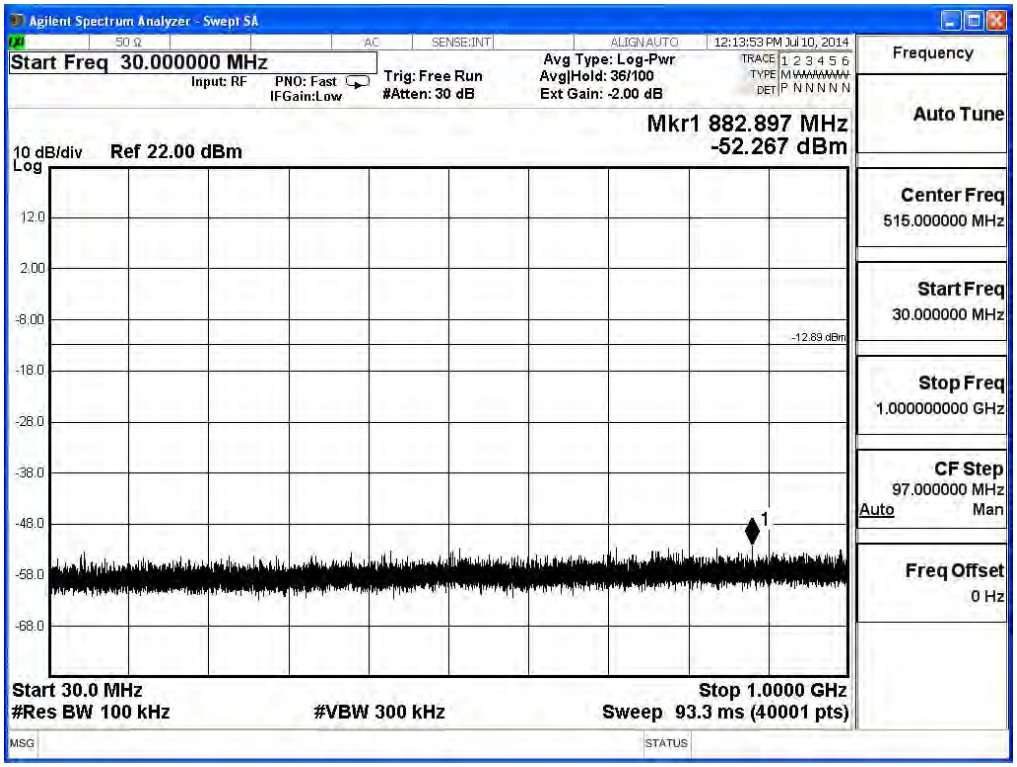
## 2412MHz (8GHz-16GHz)-802.11b



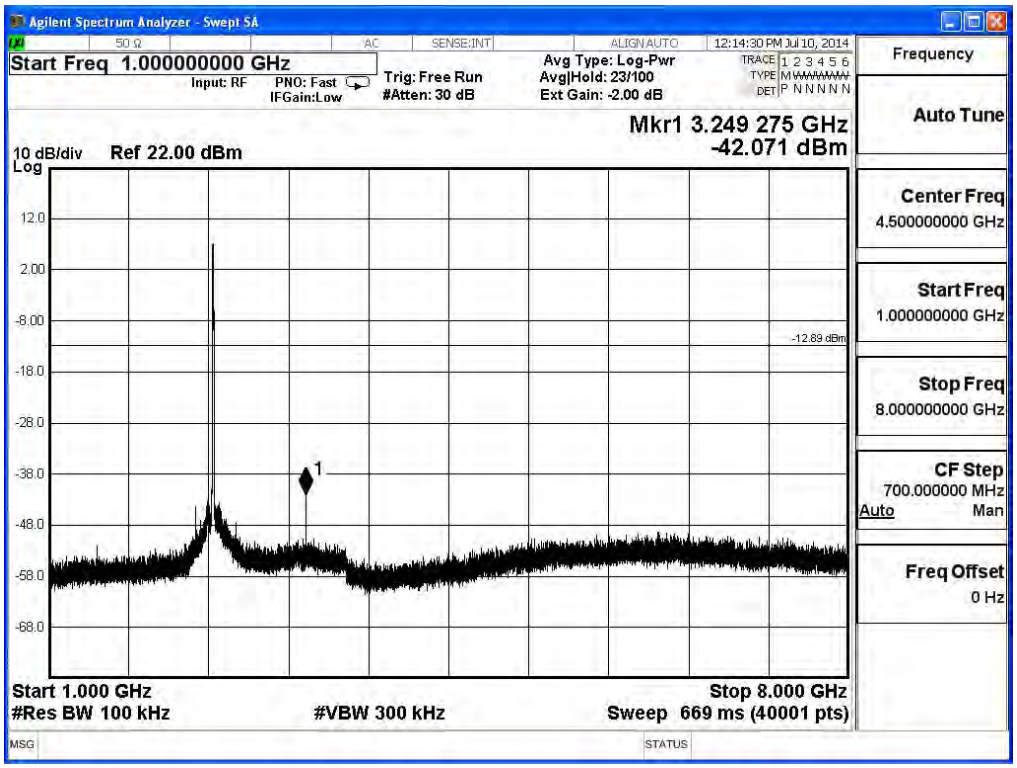

## 2412MHz (16GHz-25GHz) -802.11b



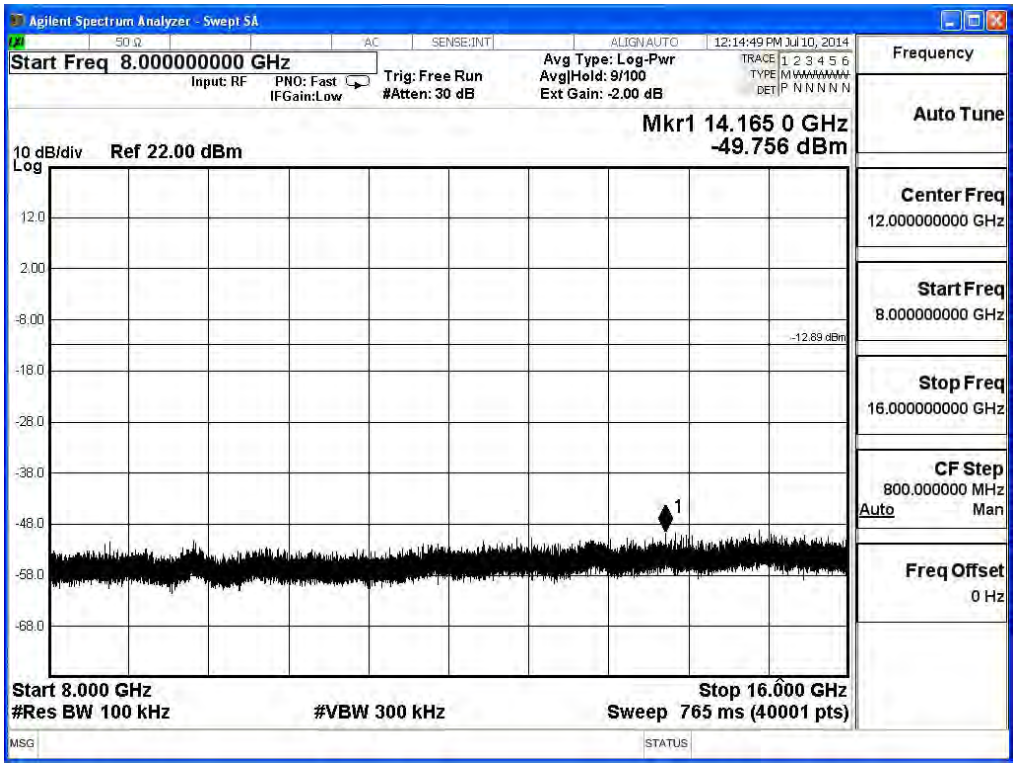
## 2437MHz (30MHz-1GHz) -802.11b



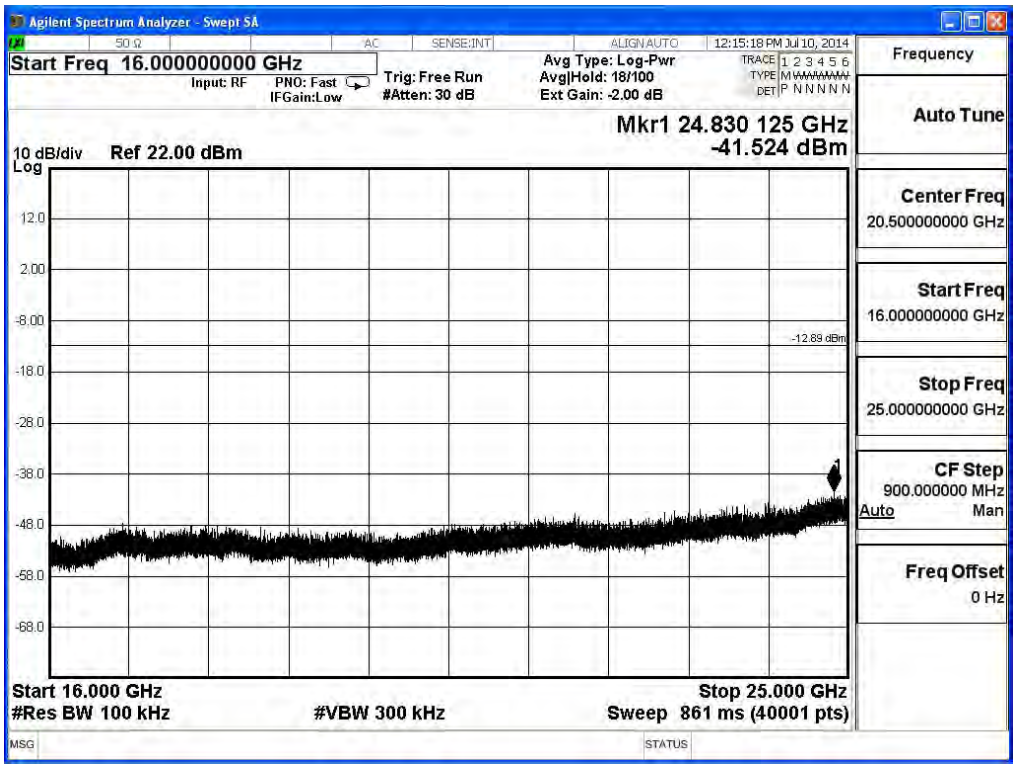

## 2437MHz (1GHz-8GHz)-802.11b



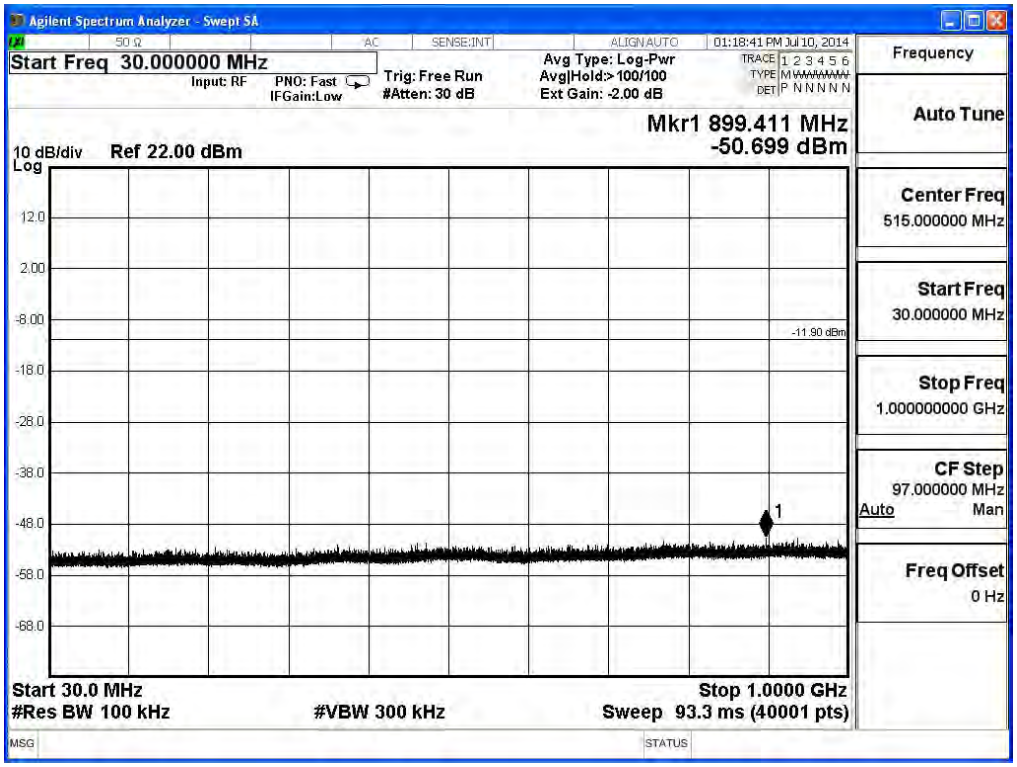
## 2437MHz (8GHz-16GHz) -802.11b



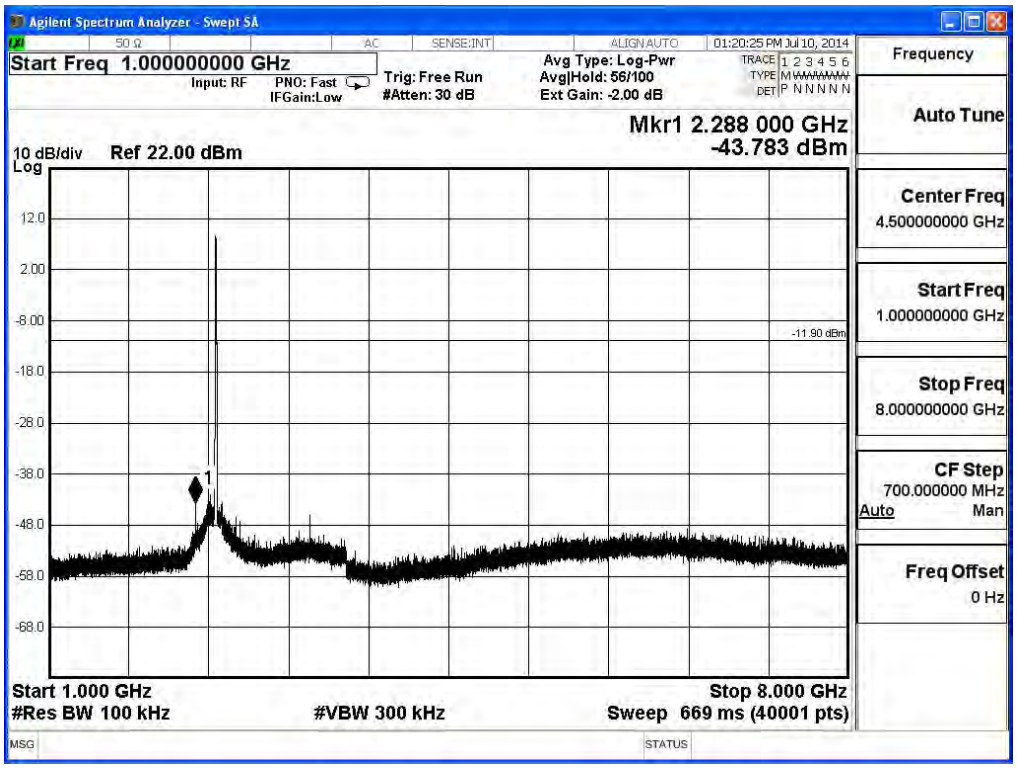

## 2437MHz (16GHz-25GHz)-802.11b



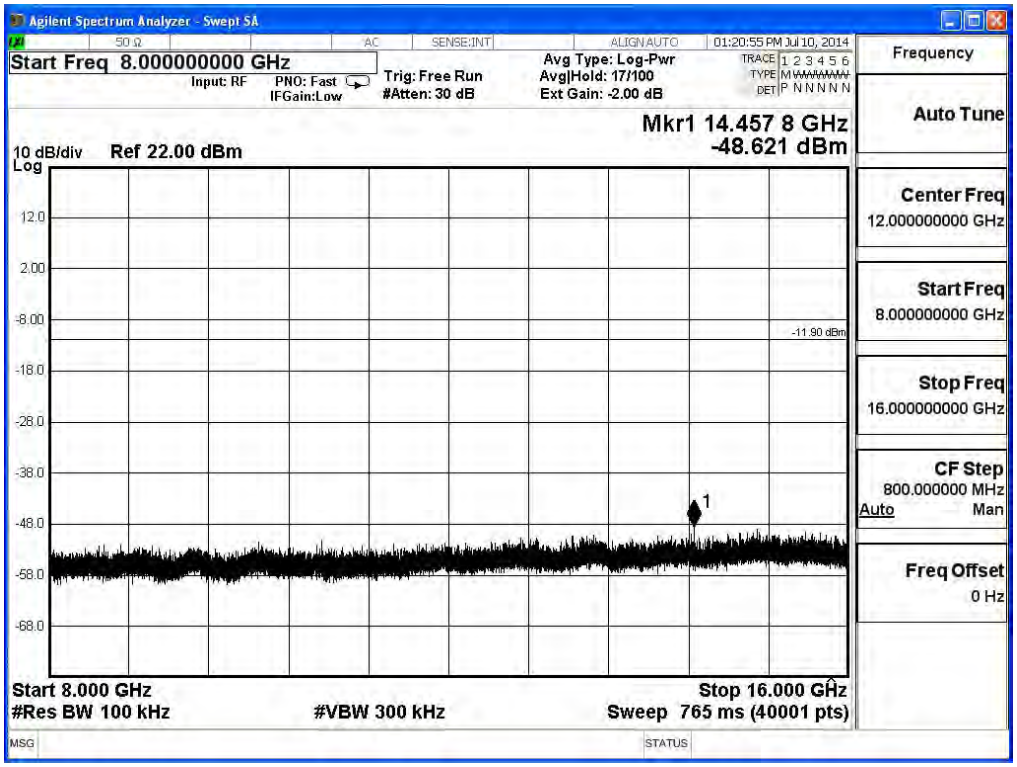
## 2462MHz (30MHz-1GHz)-802.11b



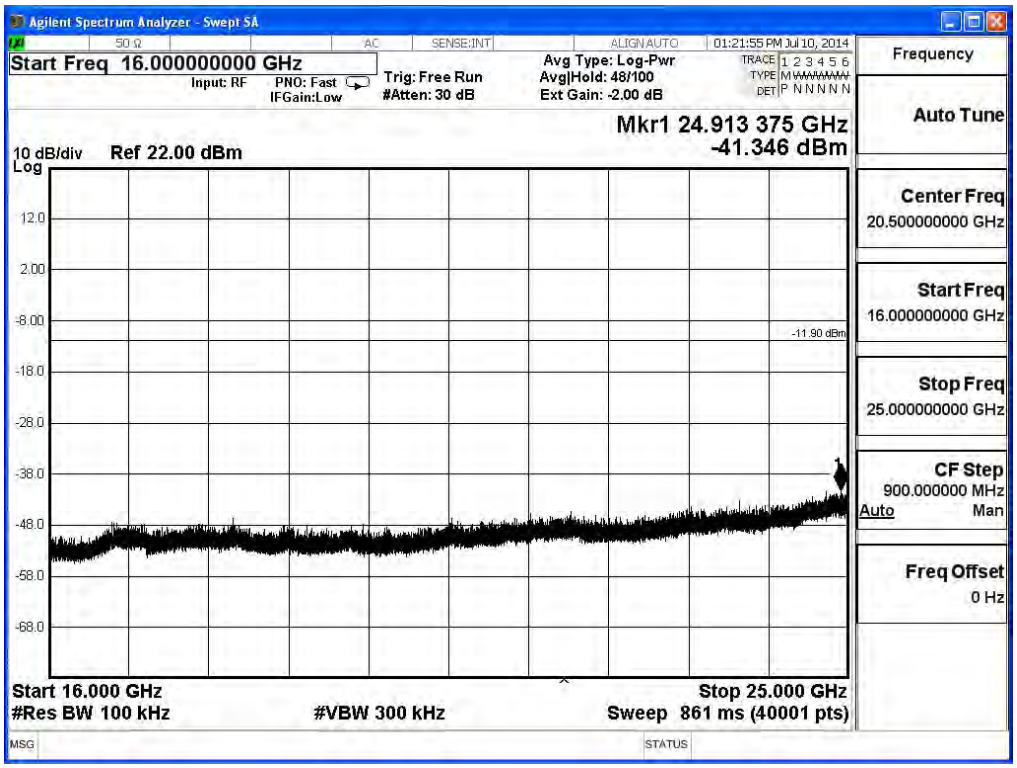

## 2462MHz (1GHz-8GHz) -802.11b



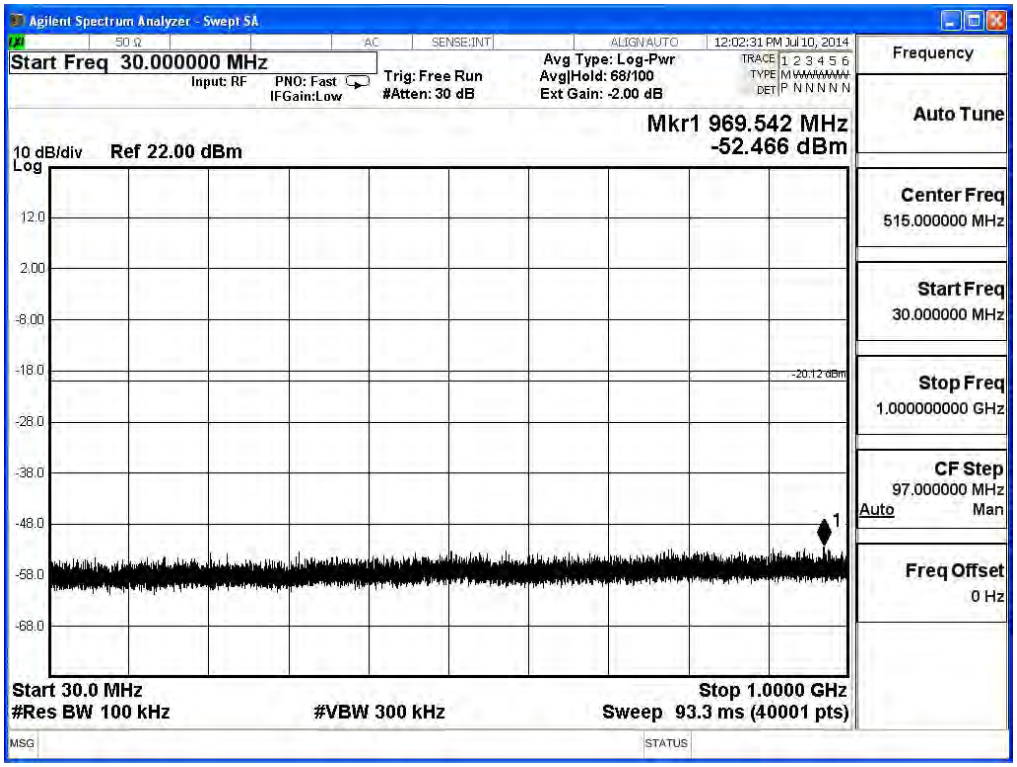
## 2462MHz (8GHz-16GHz)-802.11b



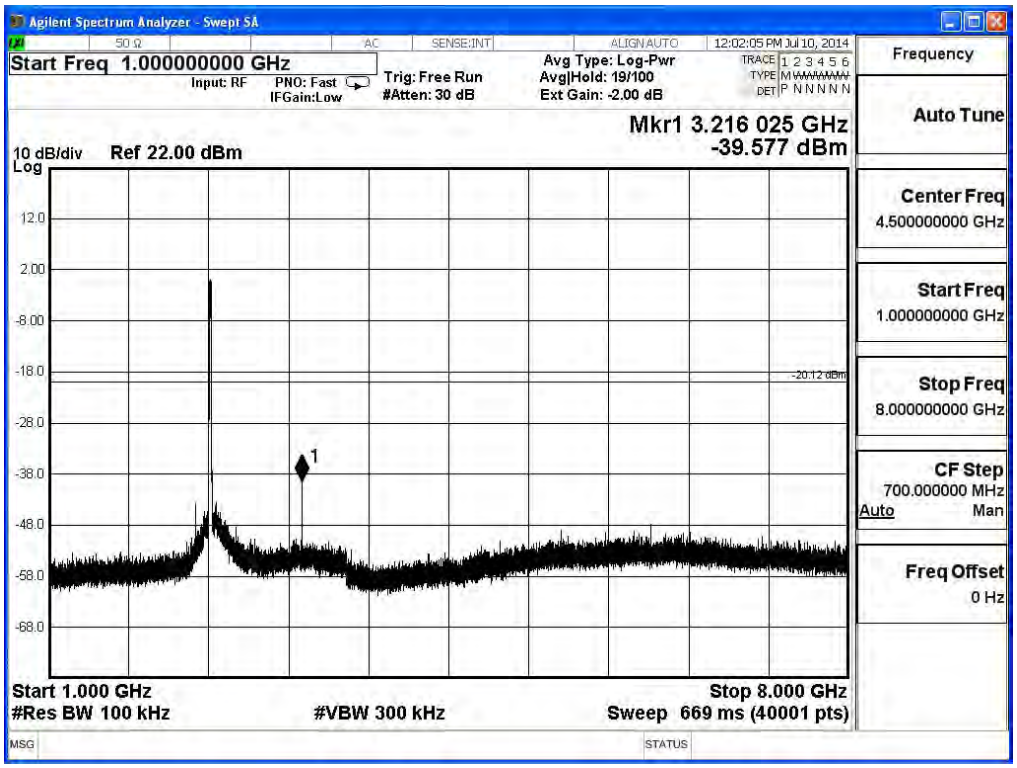

## 2462MHz (16GHz-25GHz) -802.11b



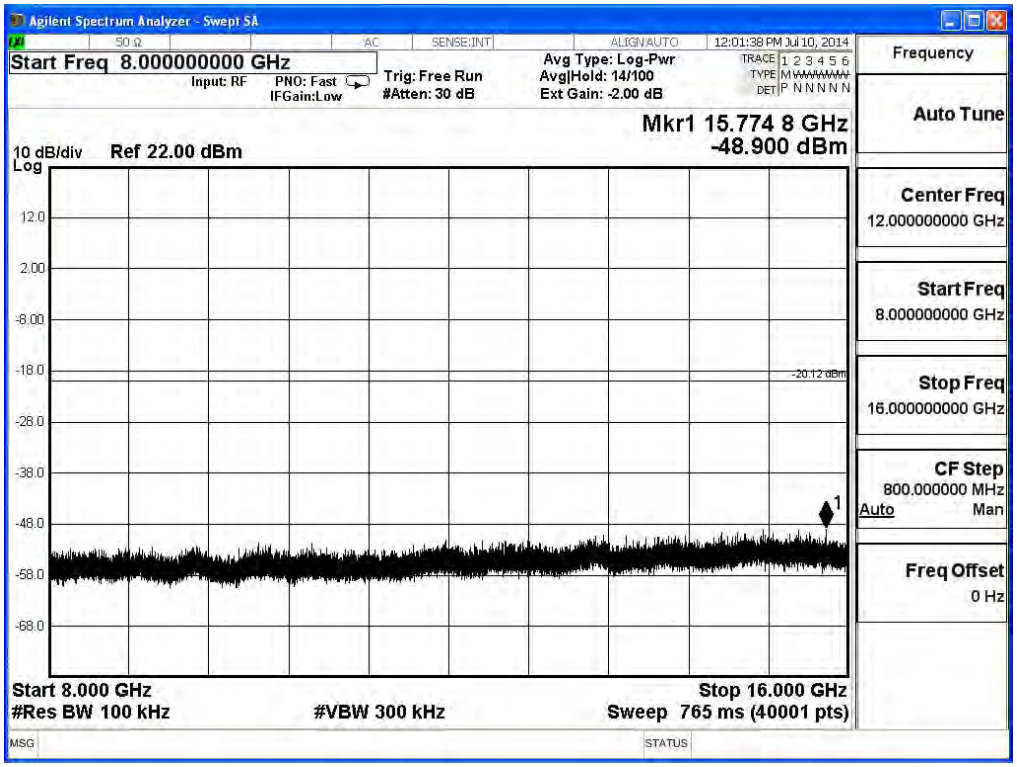
## 2412MHz (30MHz-1GHz) -802.11g



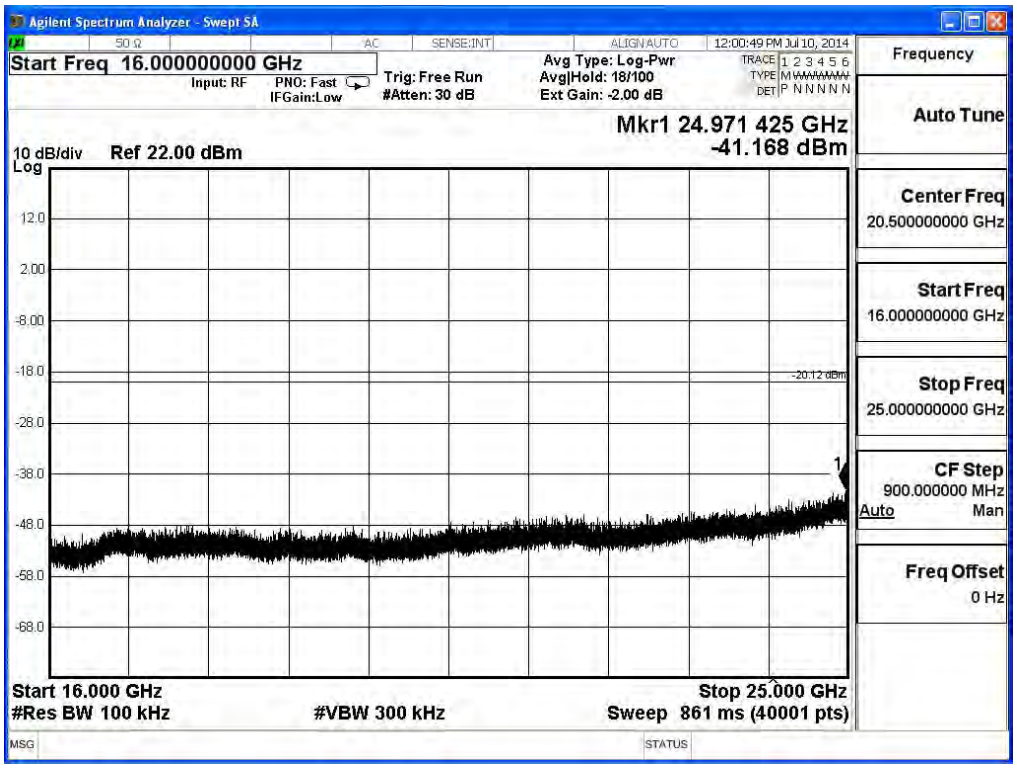

## 2412MHz (1GHz-8GHz)-802.11g



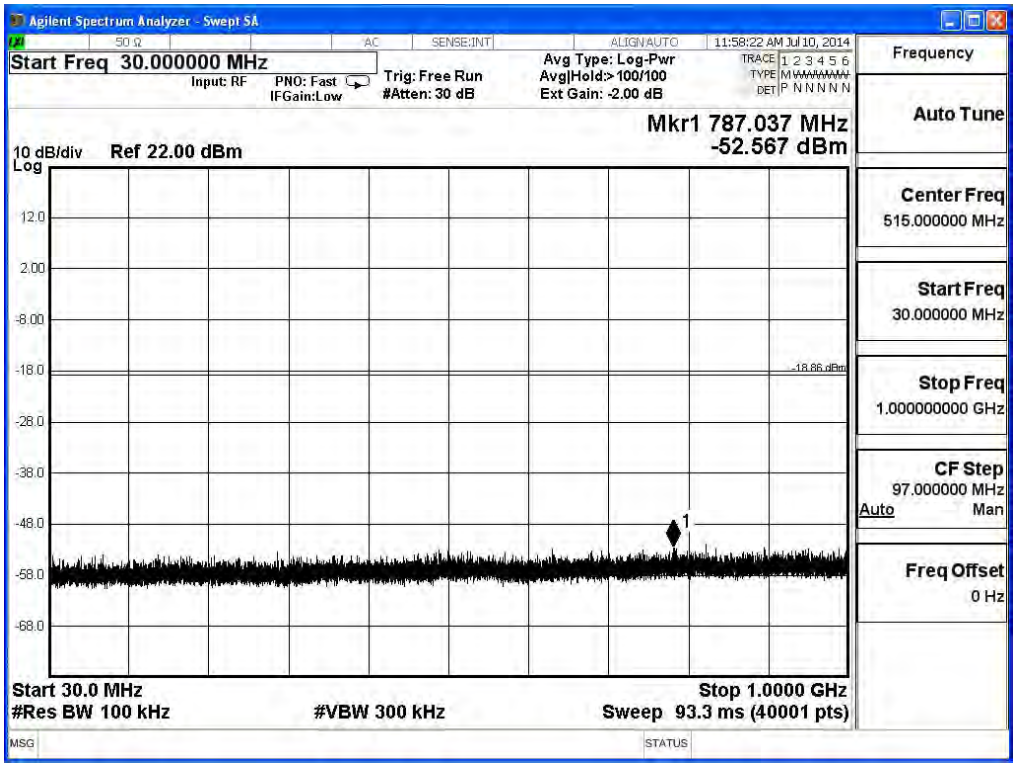
## 2412MHz (8GHz-16GHz) -802.11g



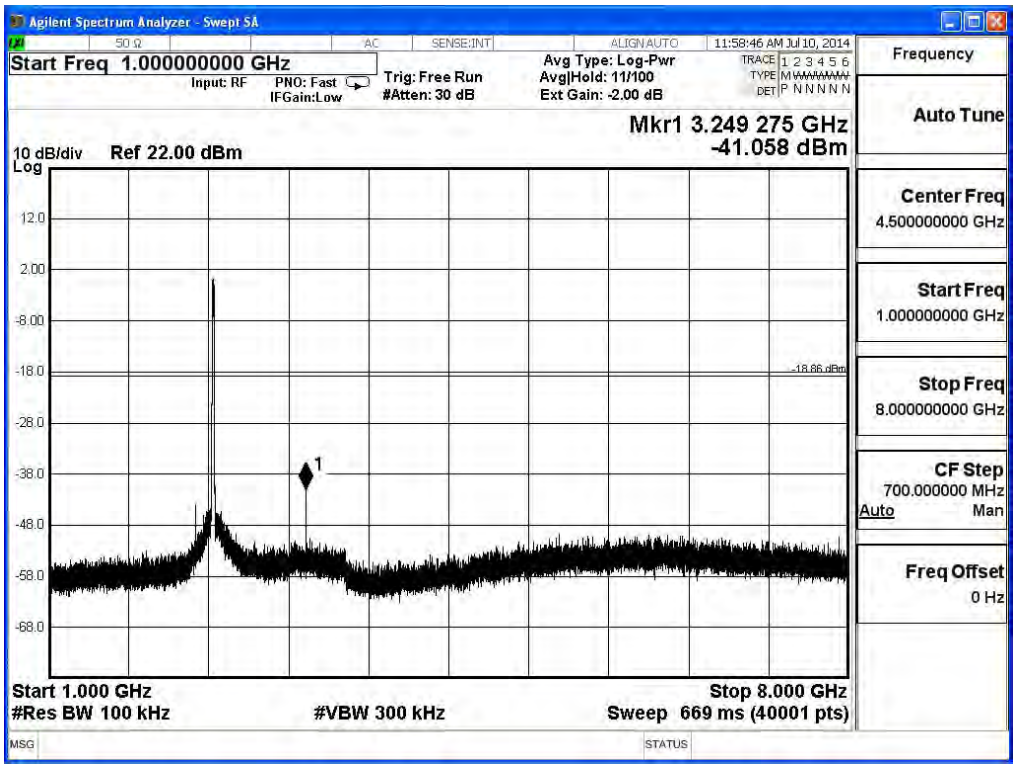

## 2412MHz (16GHz-25GHz)-802.11g



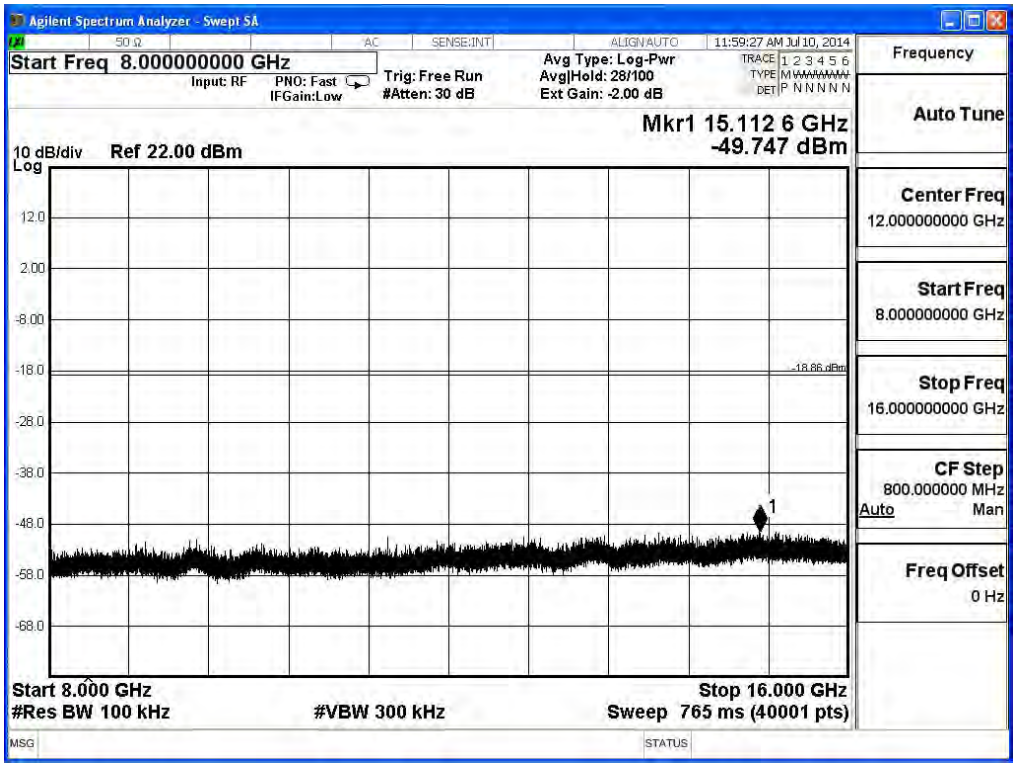
## 2437MHz (30MHz-1GHz)-802.11g



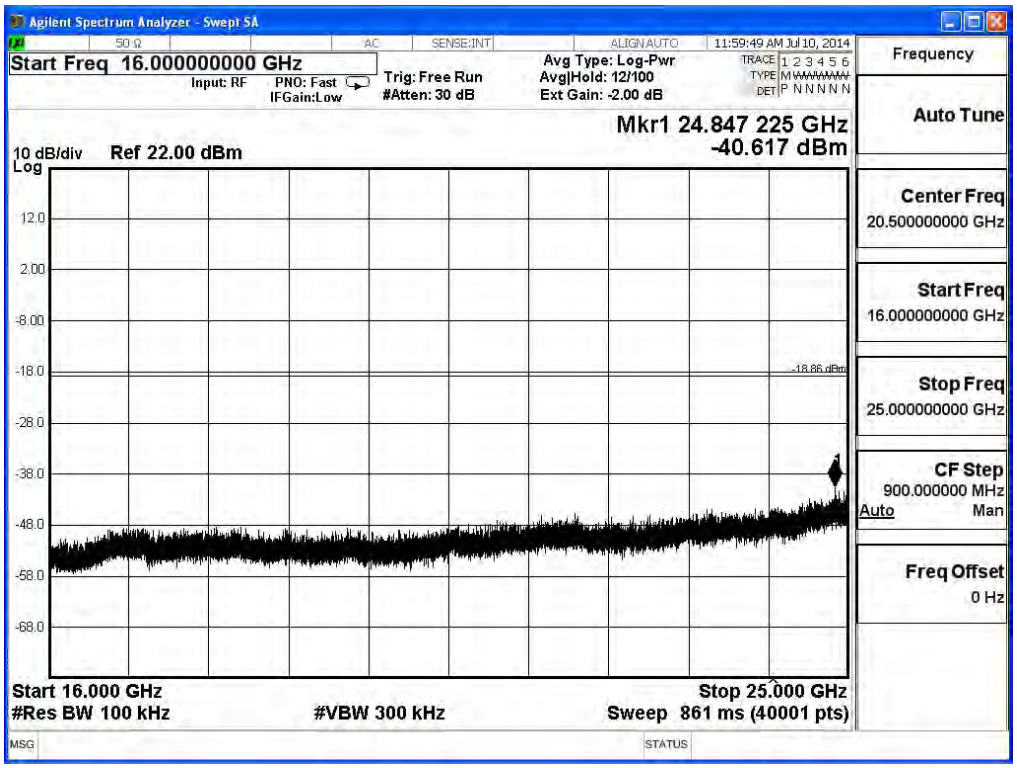

## 2437MHz (1GHz-8GHz) -802.11g



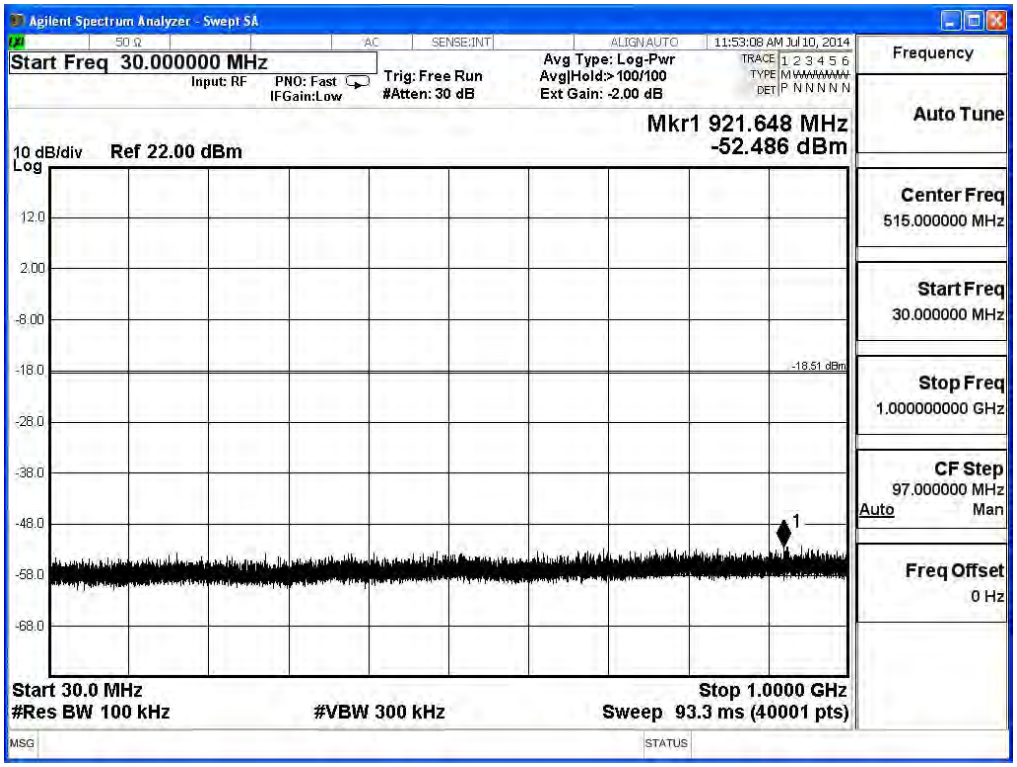
## 2437MHz (8GHz-16GHz)-802.11g



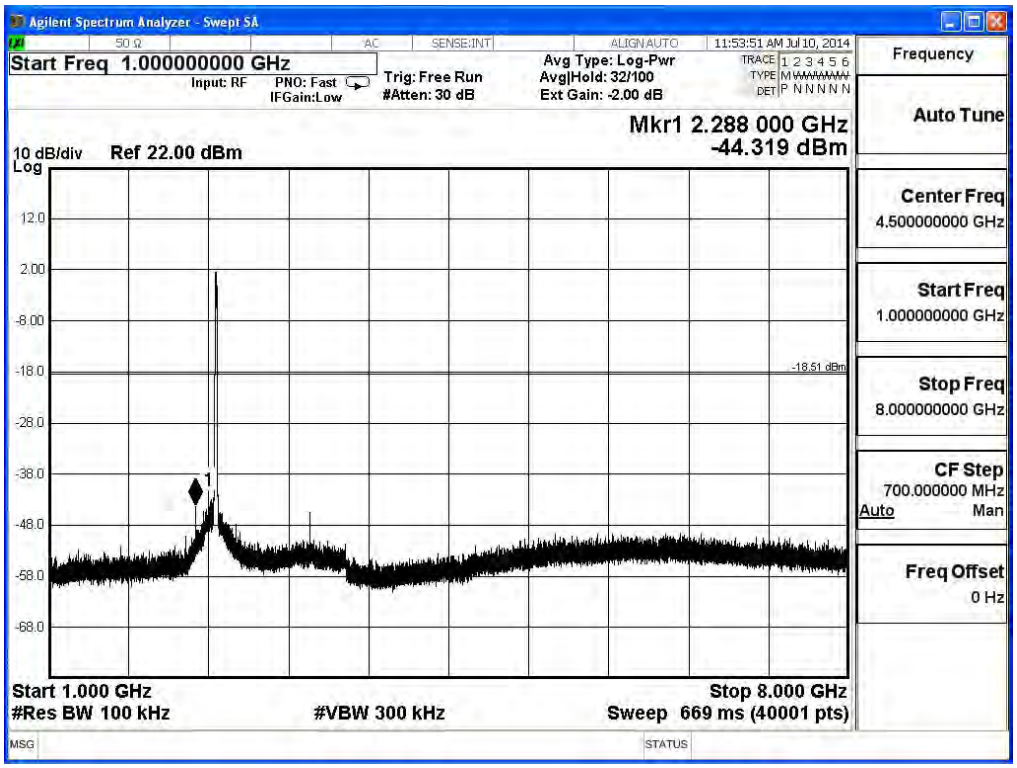

## 2437MHz (16GHz-25GHz) -802.11g



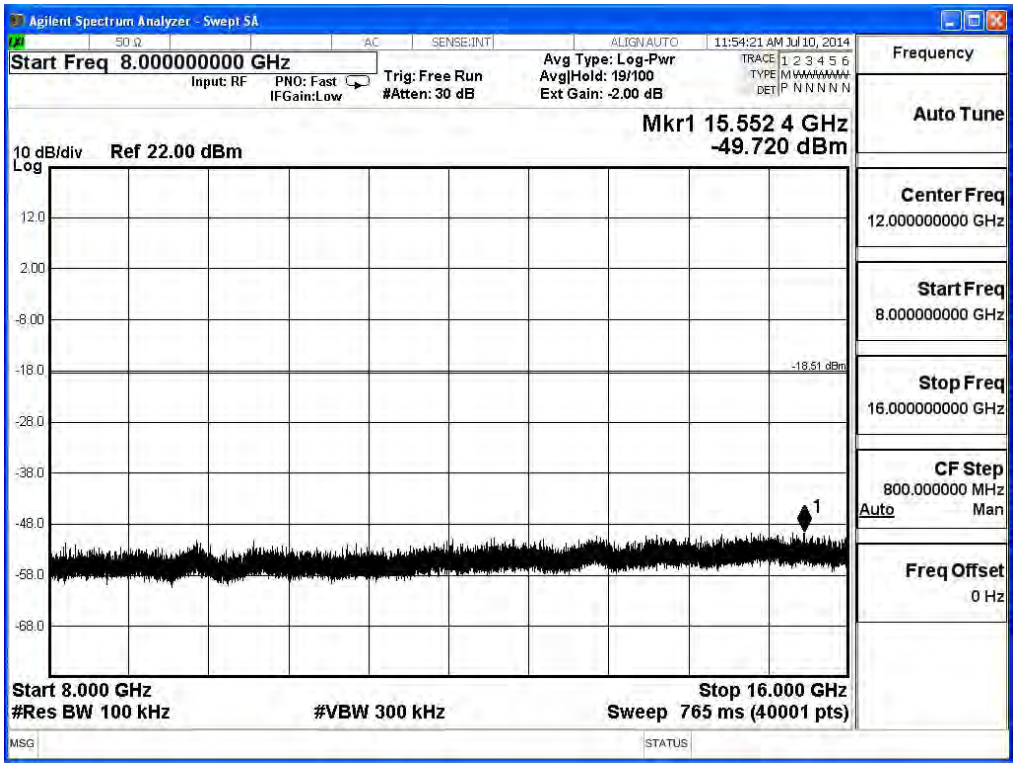
## 2462MHz (30MHz-1GHz) -802.11g



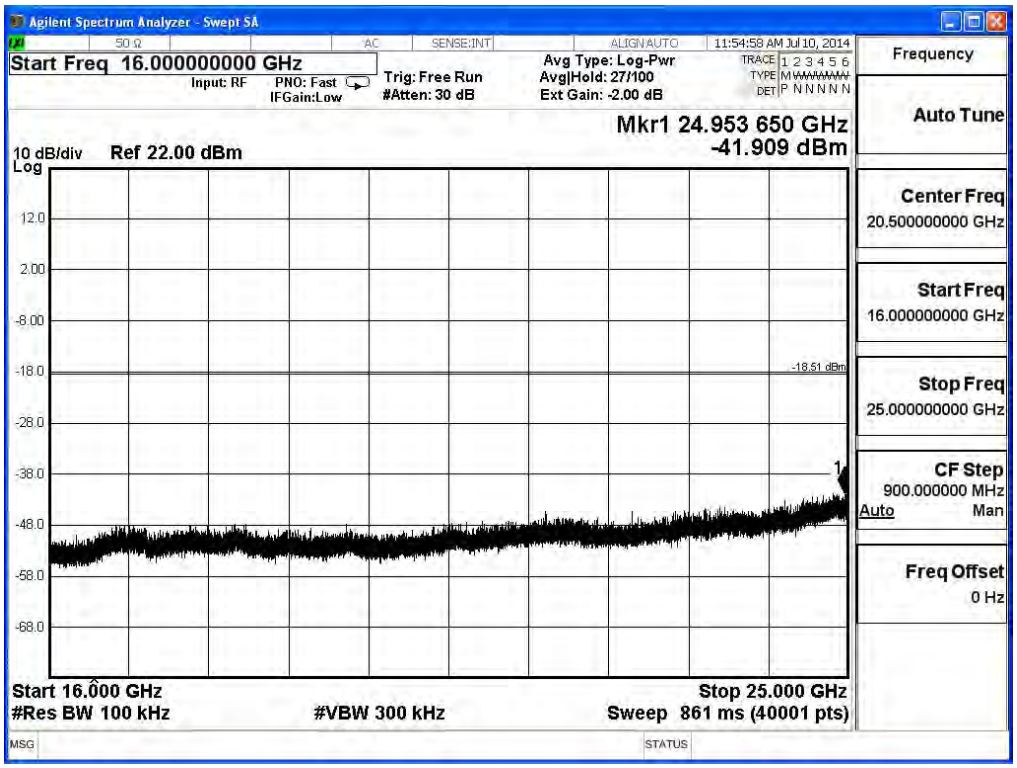

## 2462MHz (1GHz-8GHz)-802.11g



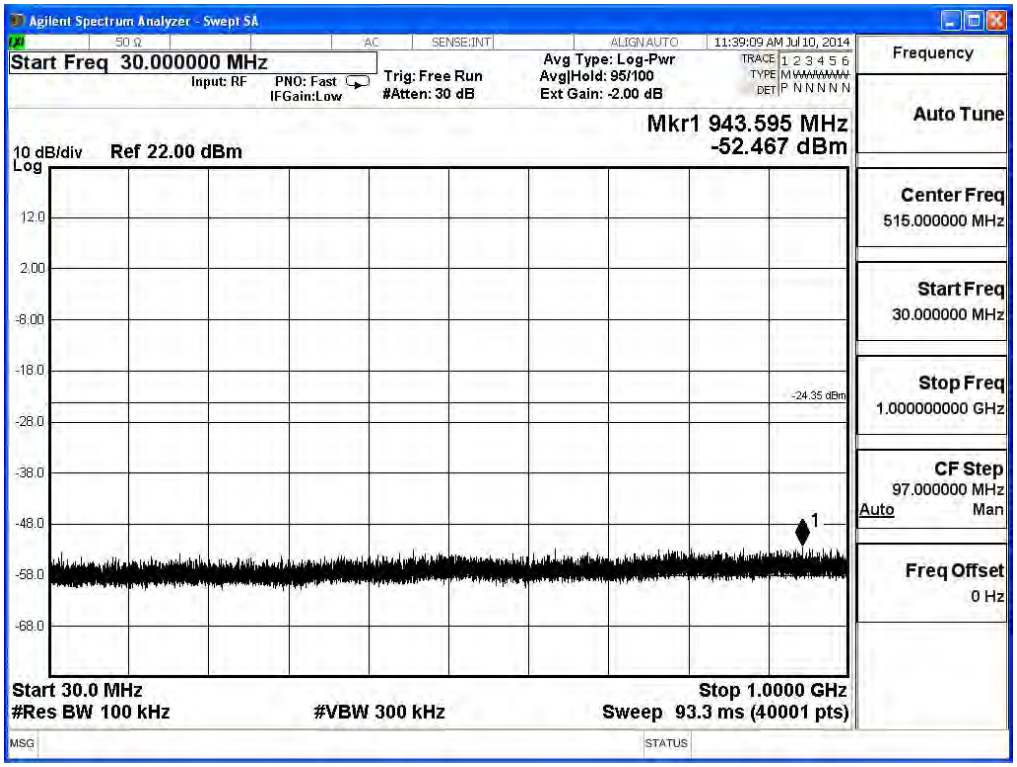
**2462MHz (8GHz-16GHz) -802.11g**



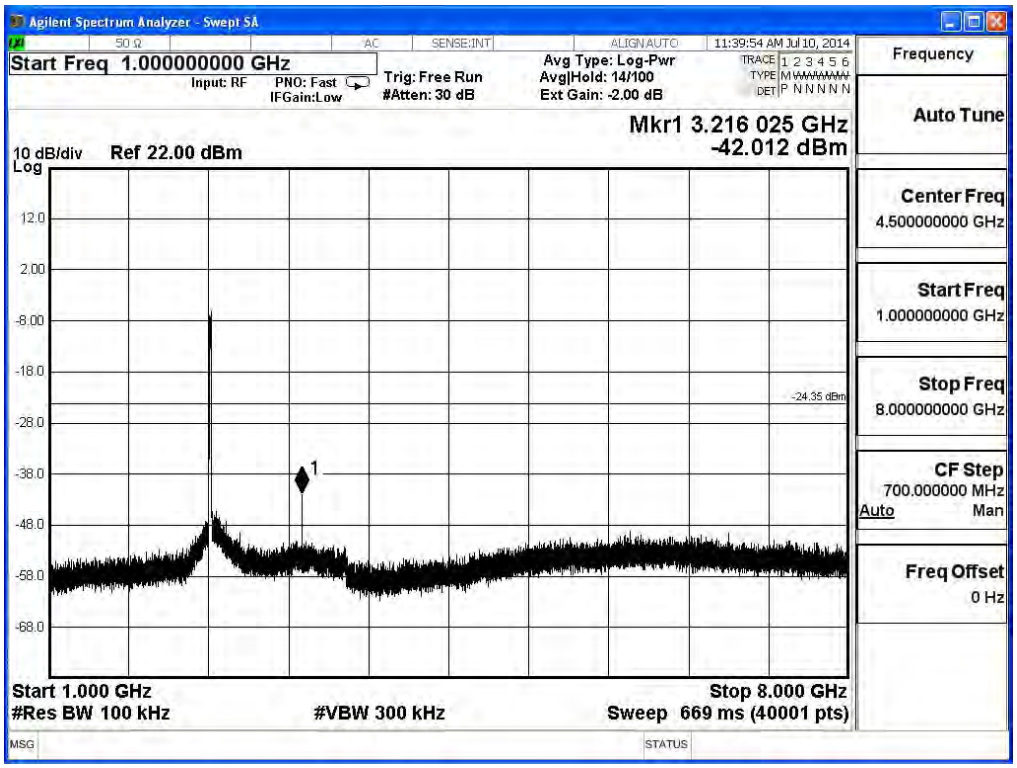

**2462MHz (16GHz-25GHz)-802.11g**



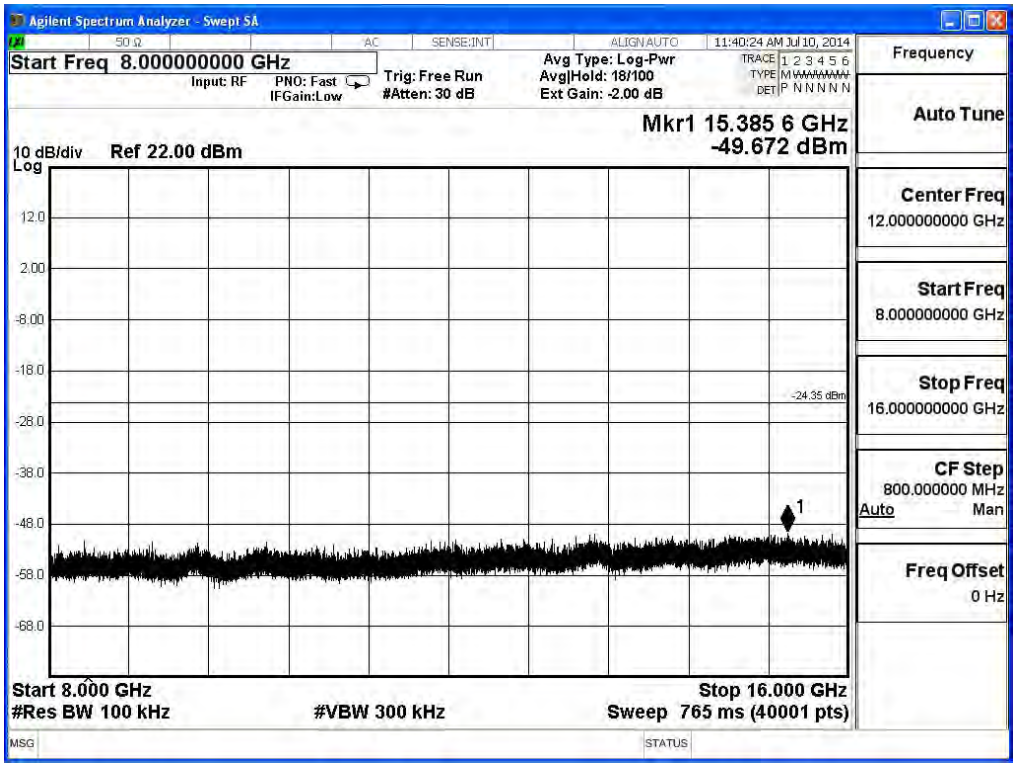
**2412MHz (30MHz-1GHz)-802.11n(20MHz) (Ant 0)**



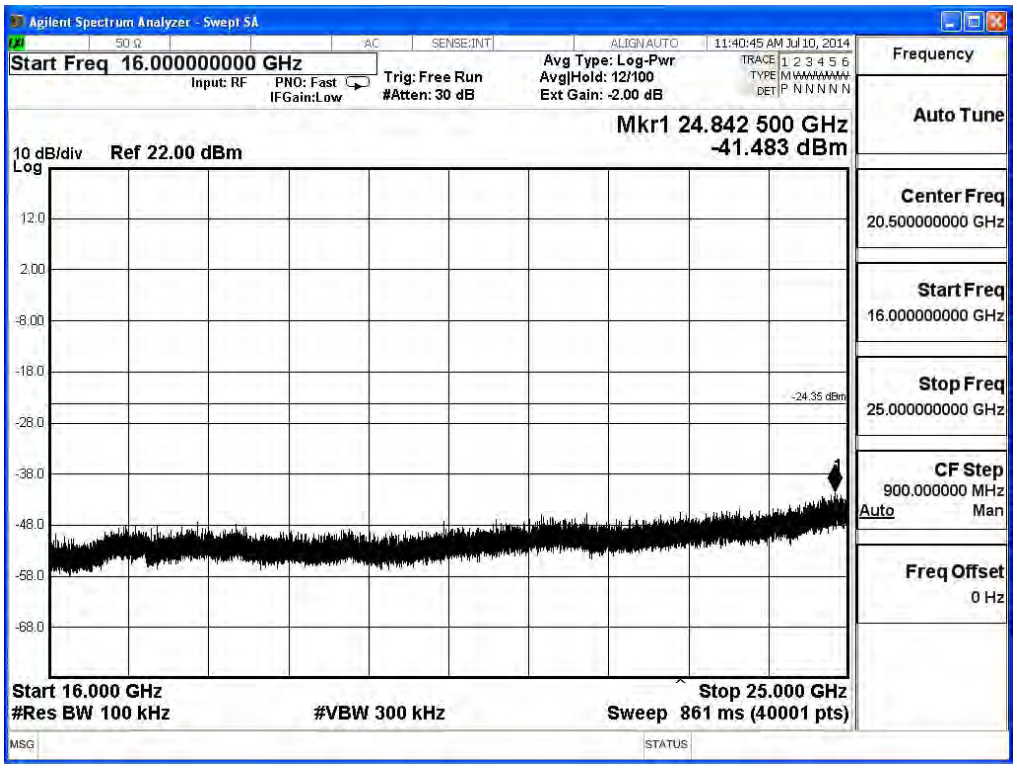

**2412MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 0)**



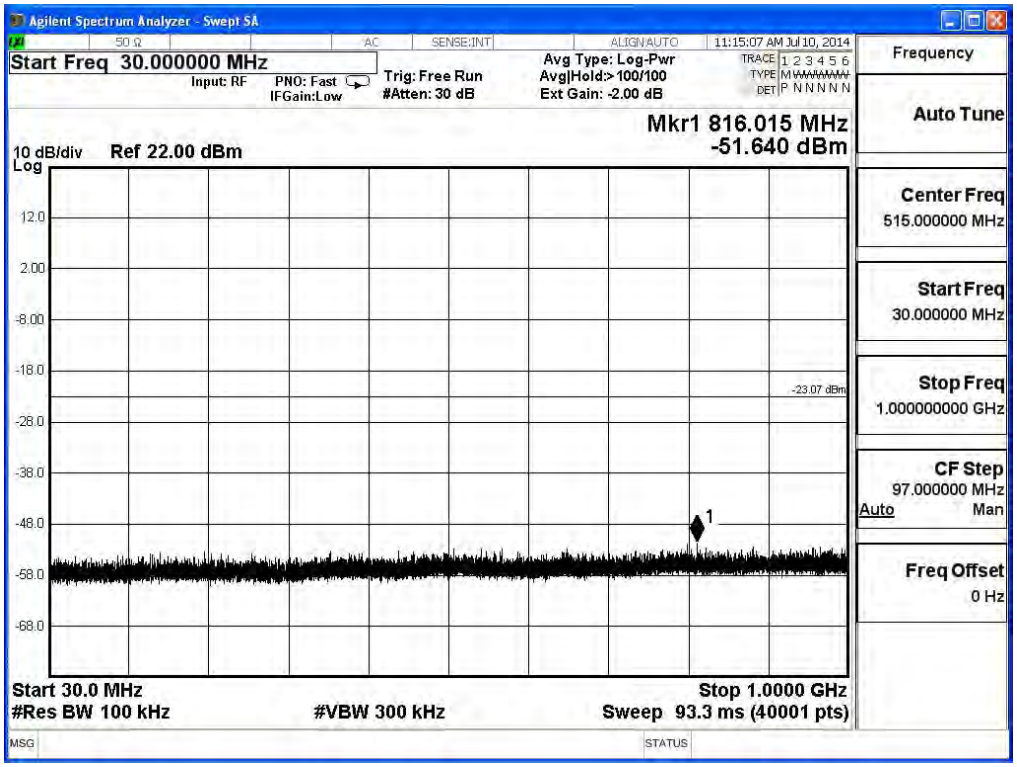
**2412MHz (8GHz-16GHz)-802.11n(20MHz) (Ant 0)**



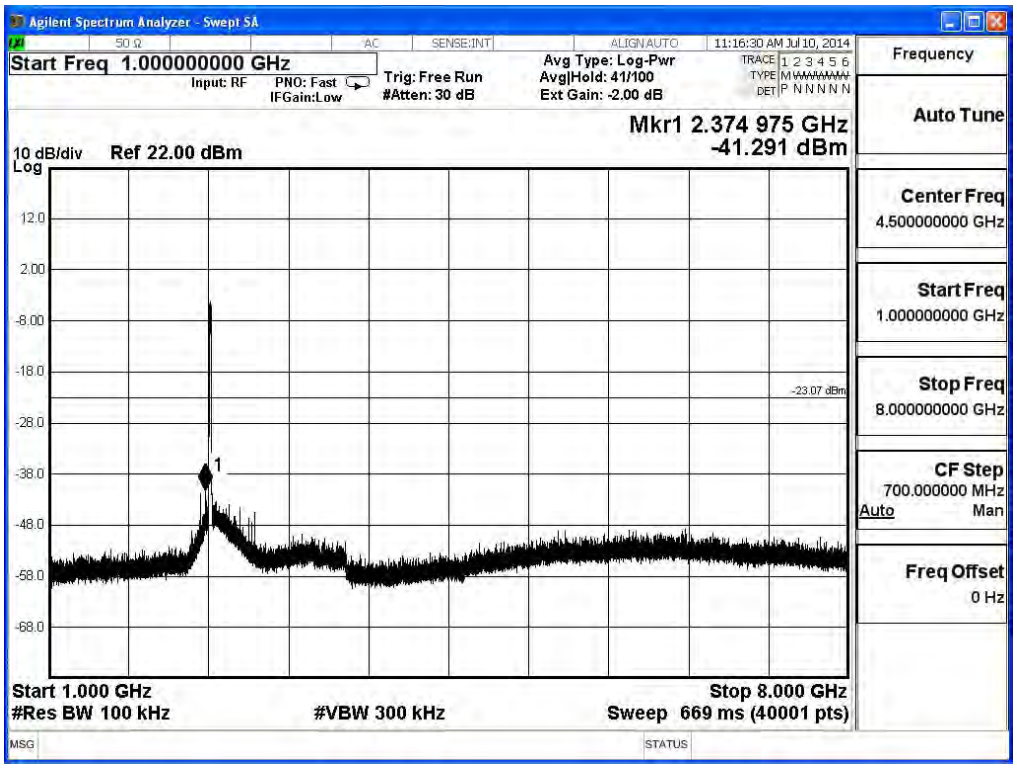

**2412MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 0)**



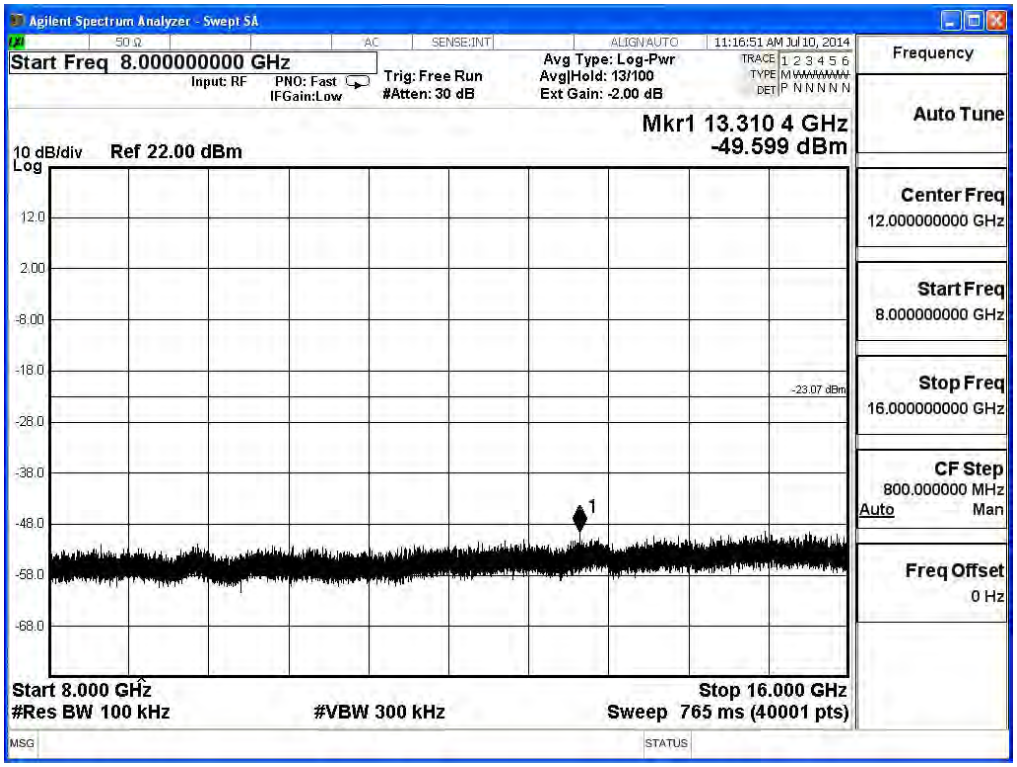
## 2412MHz (30MHz-1GHz)-802.11n(20MHz) (Ant 1)



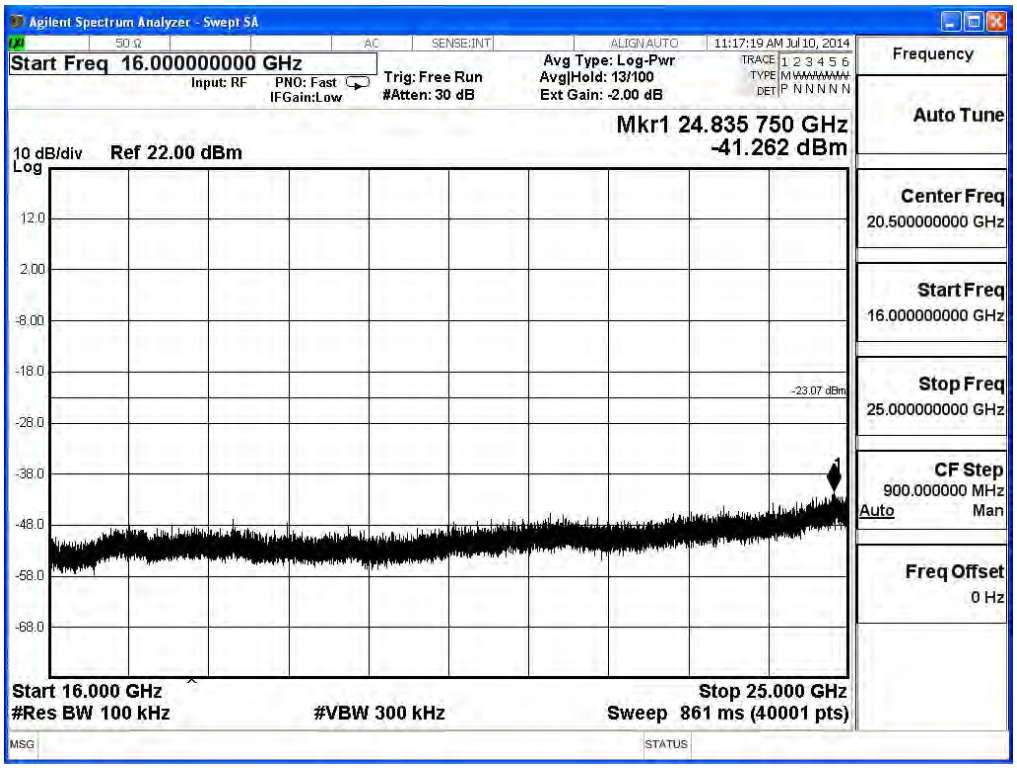

## 2412MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 1)



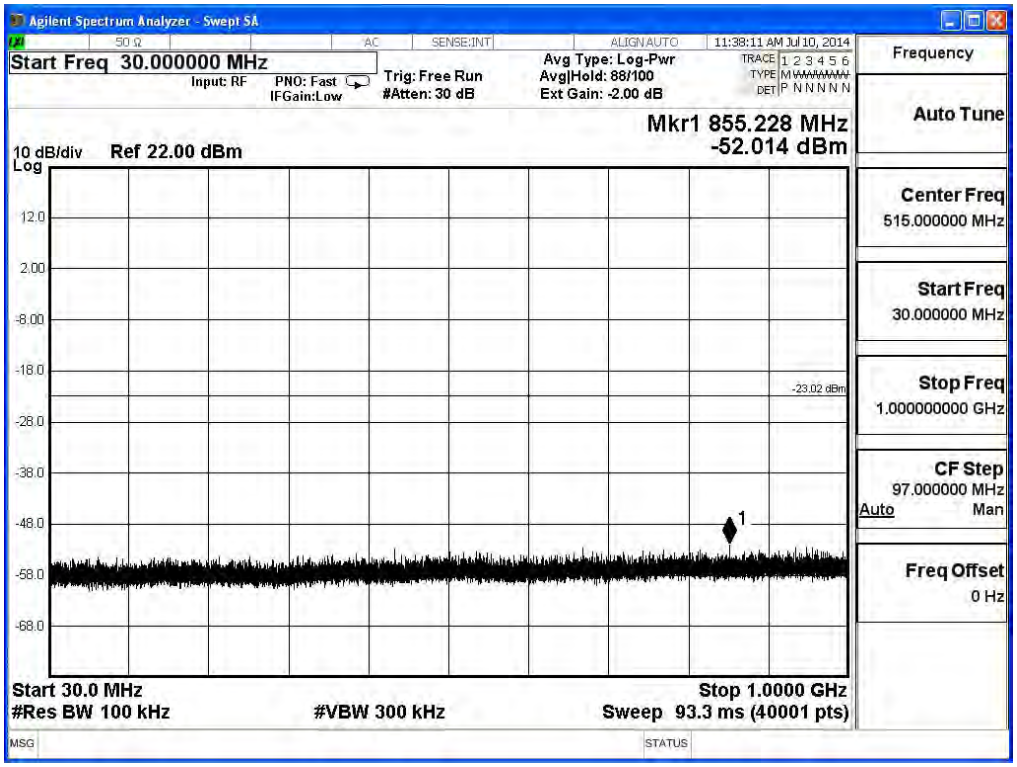
**2412MHz (8GHz-16GHz)-802.11n(20MHz) (Ant 1)**



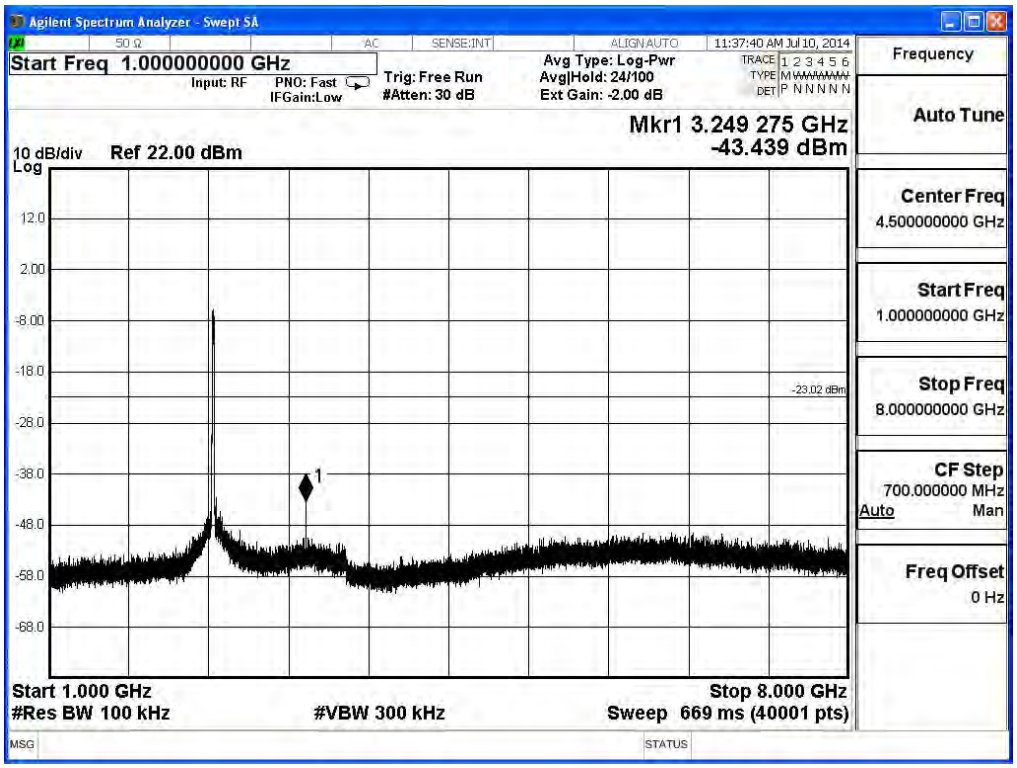

**2412MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 1)**



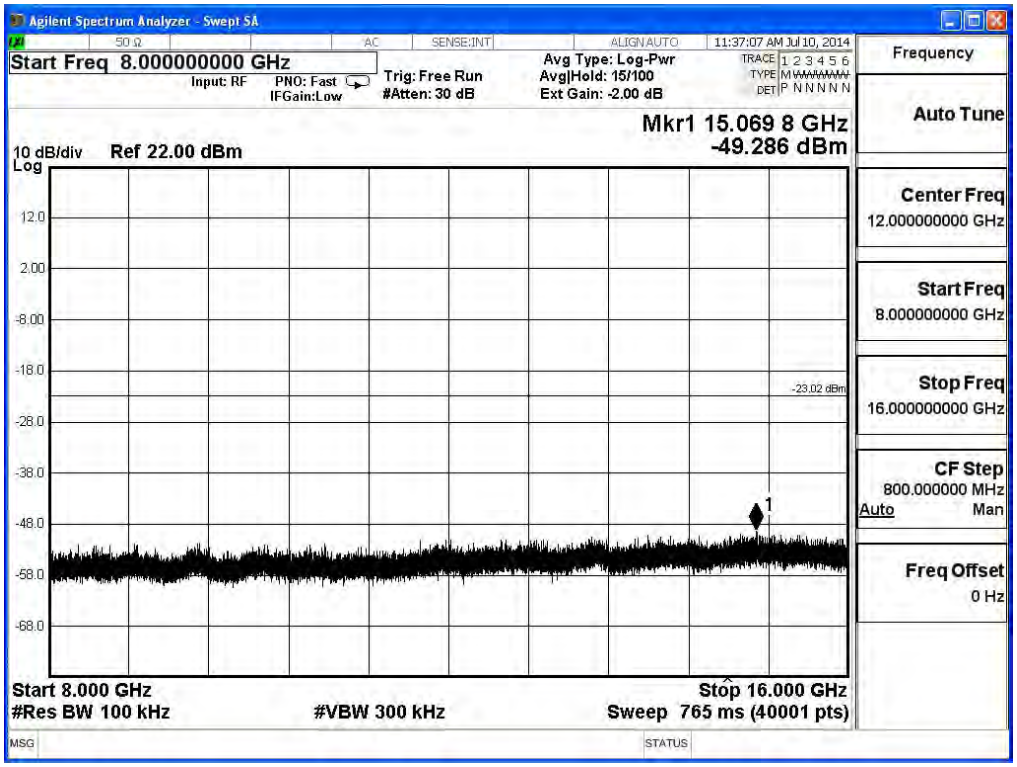
**2437MHz (30MHz-1GHz) -802.11n(20MHz) (Ant 0)**



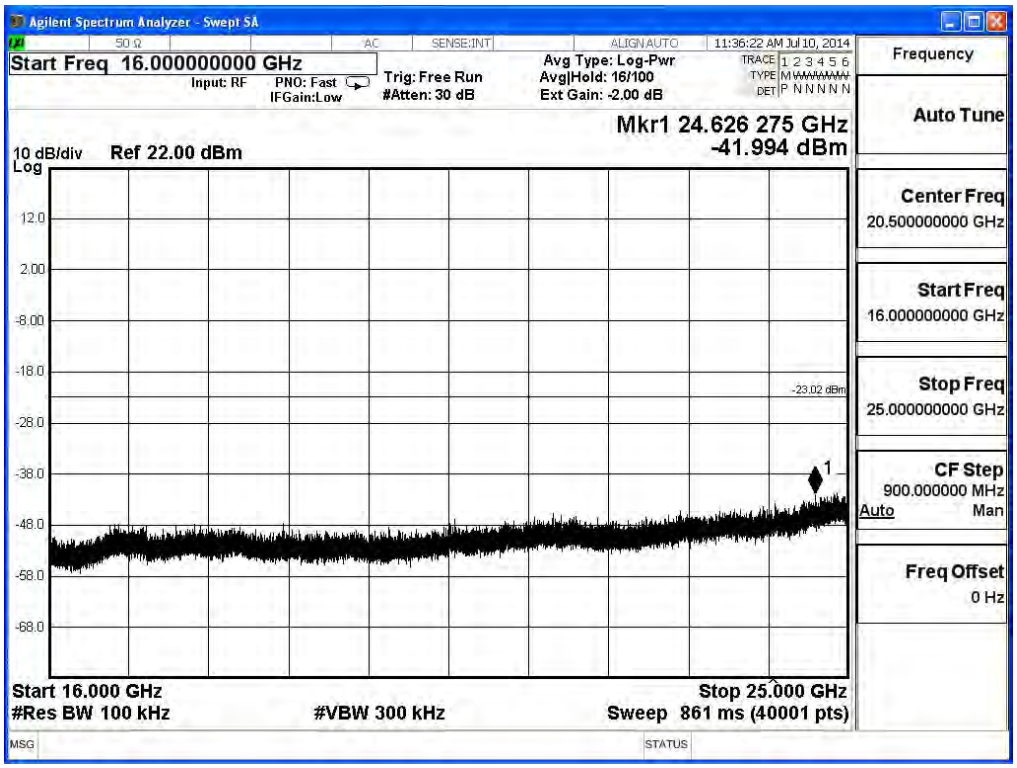

**2437MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 0)**



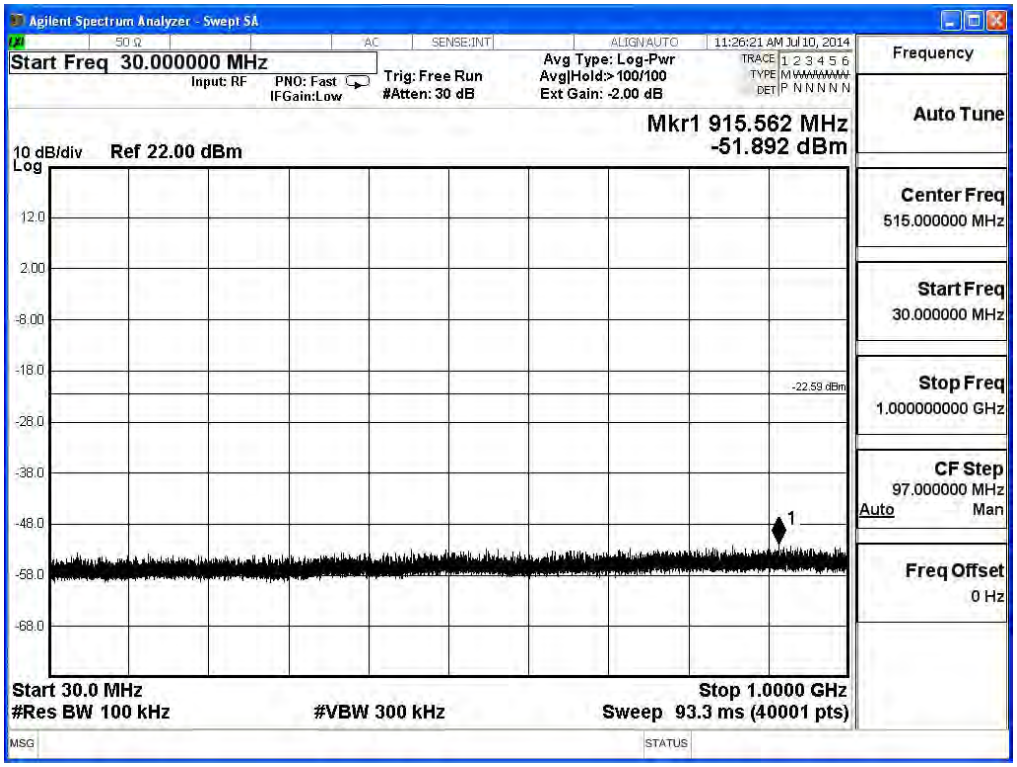
**2437MHz (8GHz-16GHz) -802.11n(20MHz) (Ant 0)**



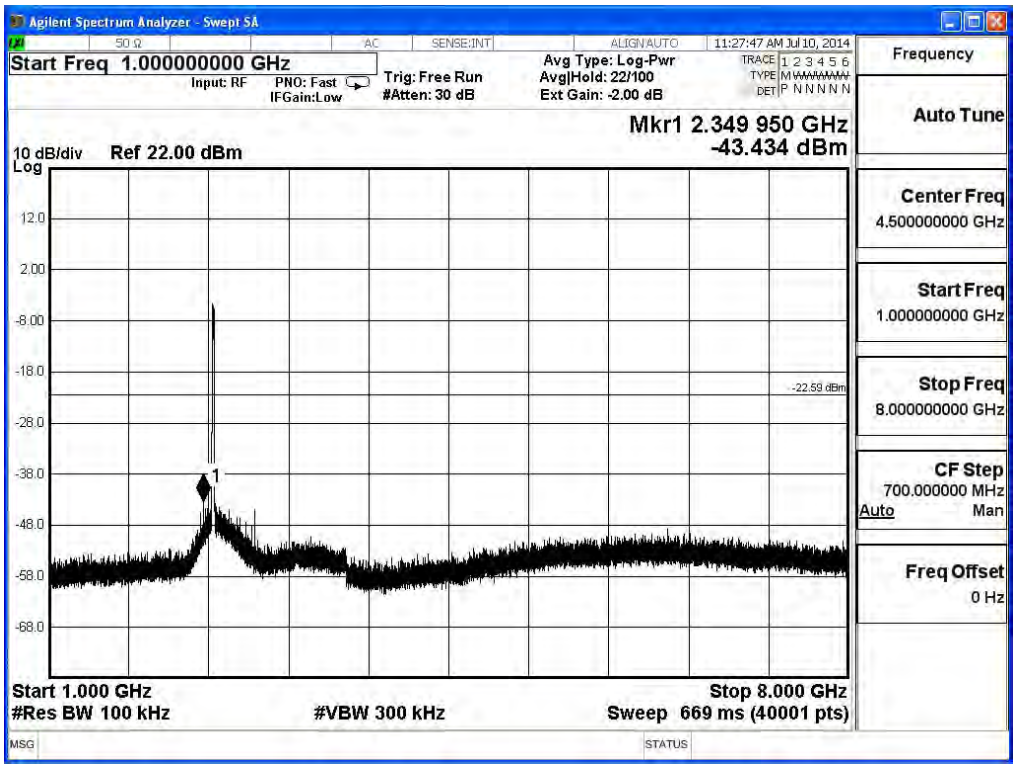

**2437MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 0)**



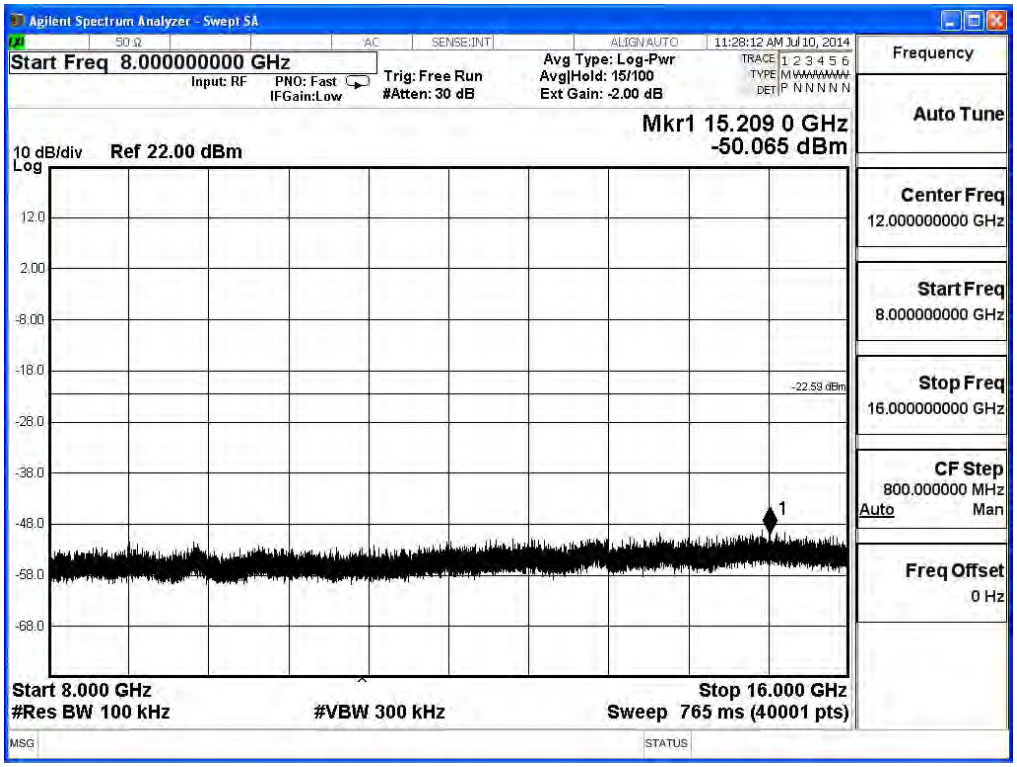
**2437MHz (30MHz-1GHz) -802.11n(20MHz) (Ant 1)**



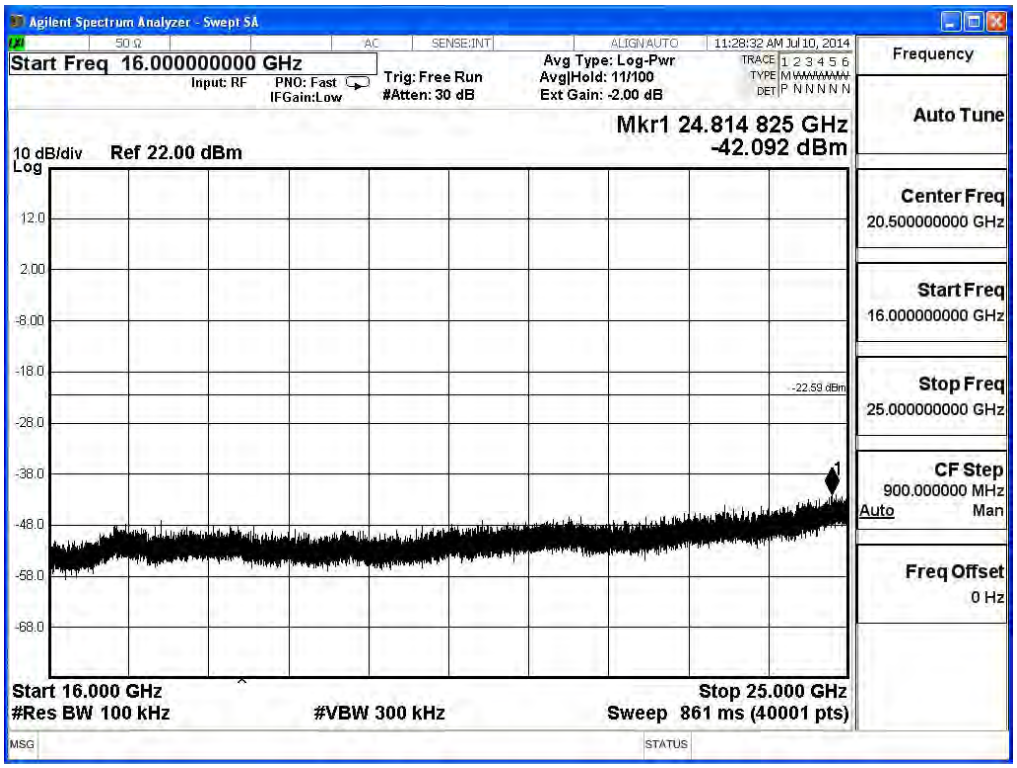

**2437MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 1)**



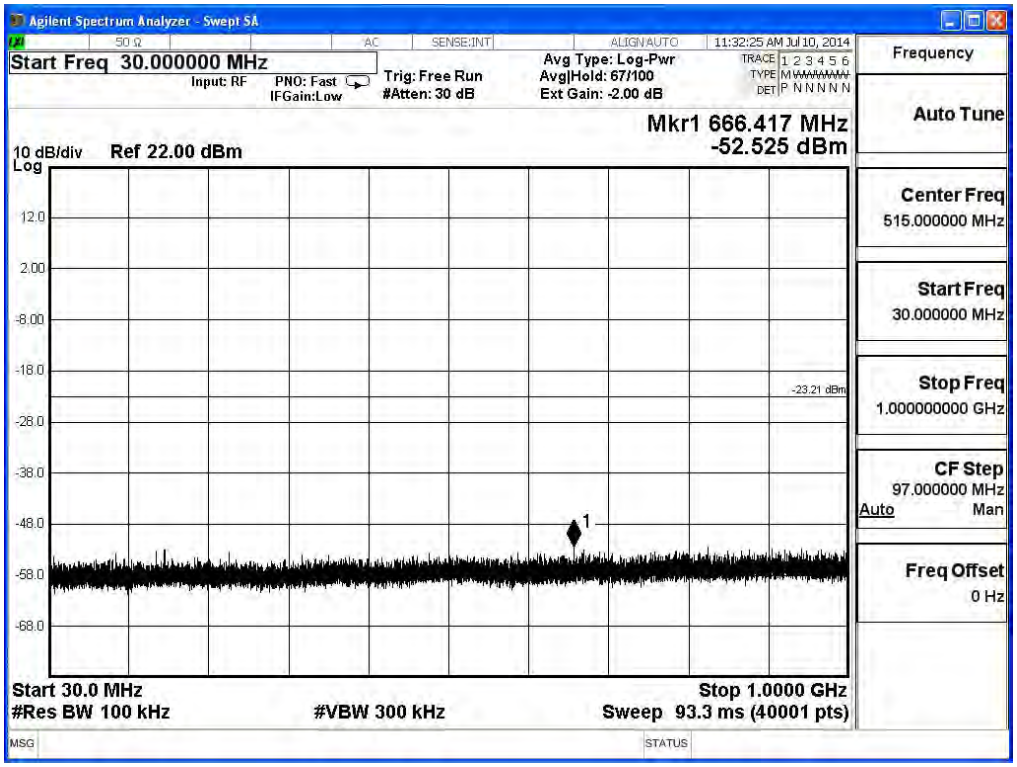
**2437MHz (8GHz-16GHz) -802.11n(20MHz) (Ant 1)**



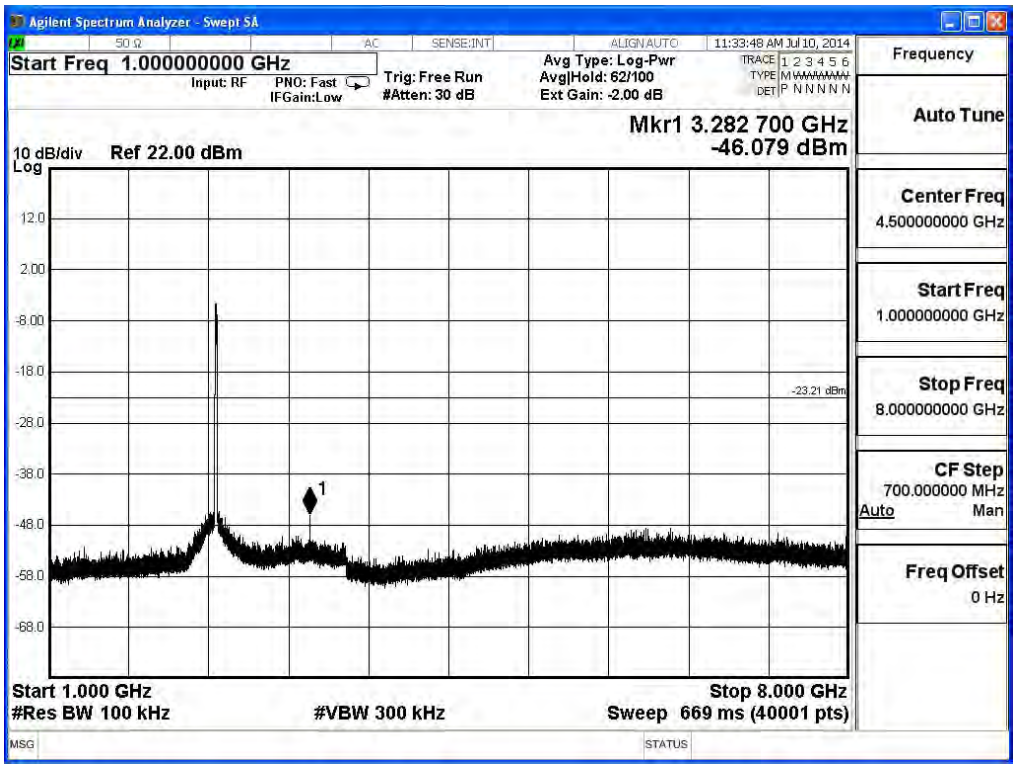

**2437MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 1)**



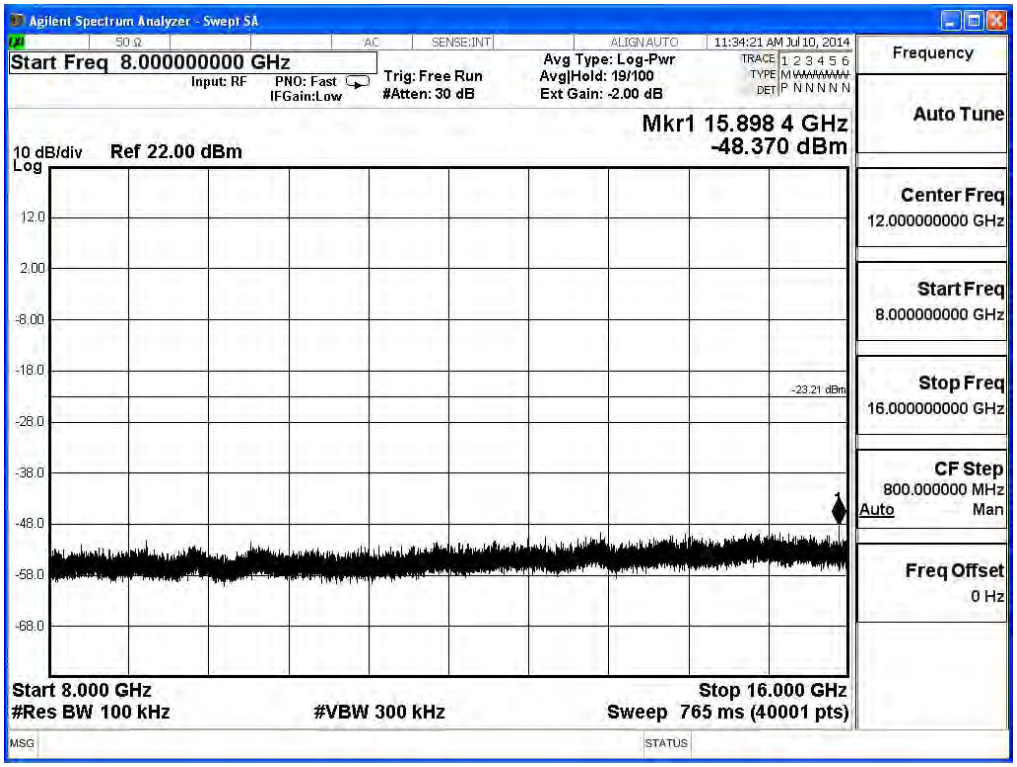
**2462MHz (30MHz-1GHz)-802.11n(20MHz) (Ant 0)**



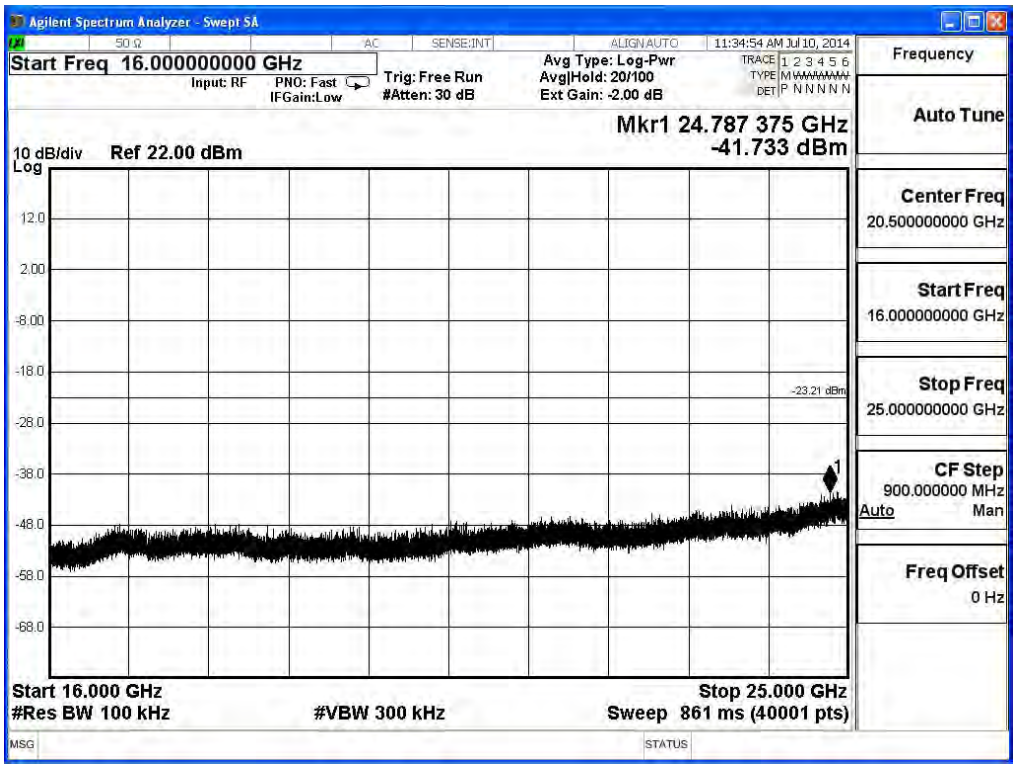

**2462MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 0)**



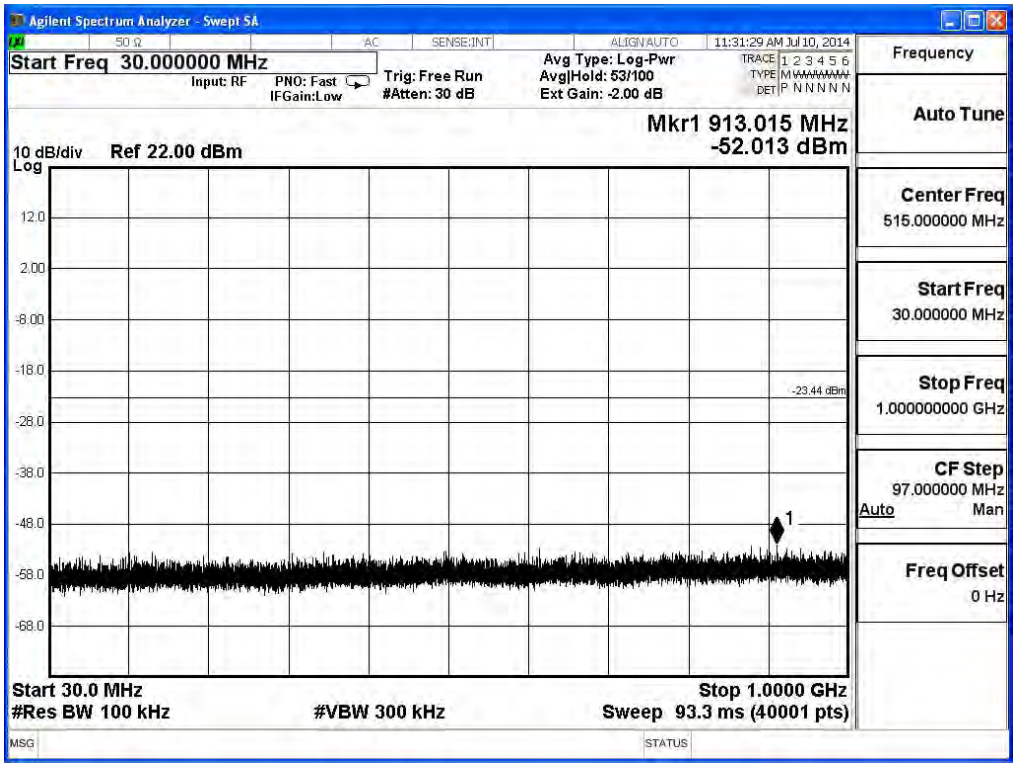
## 2462MHz (8GHz-16GHz)-802.11n(20MHz) (Ant 0)



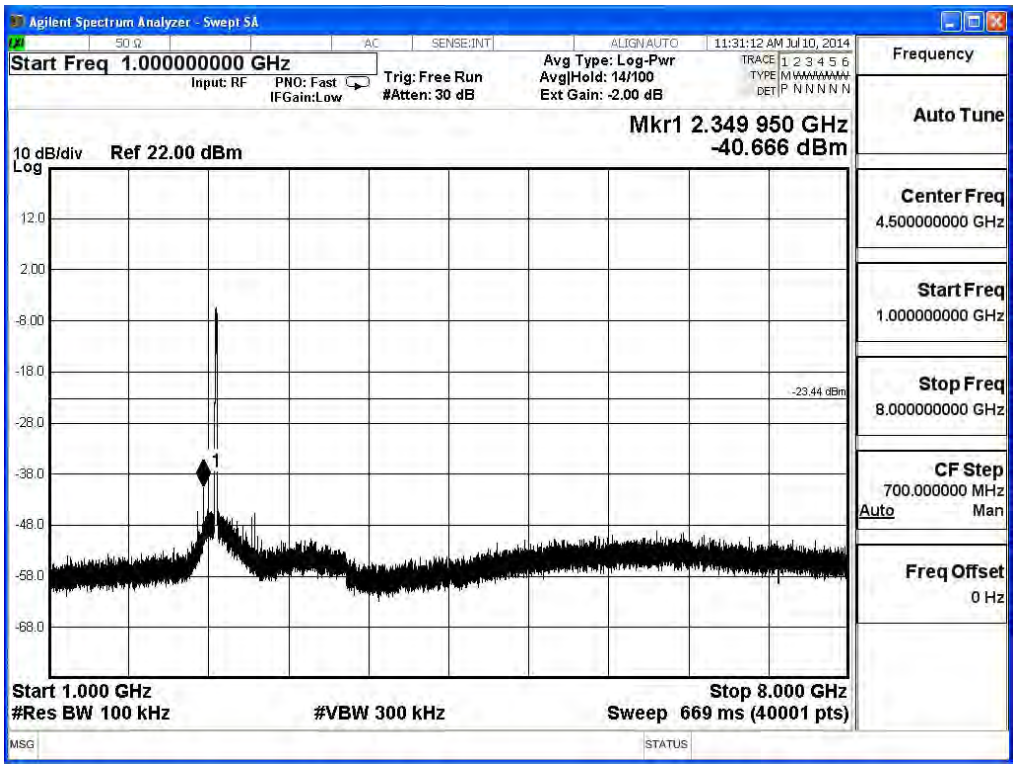

## 2462MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 0)



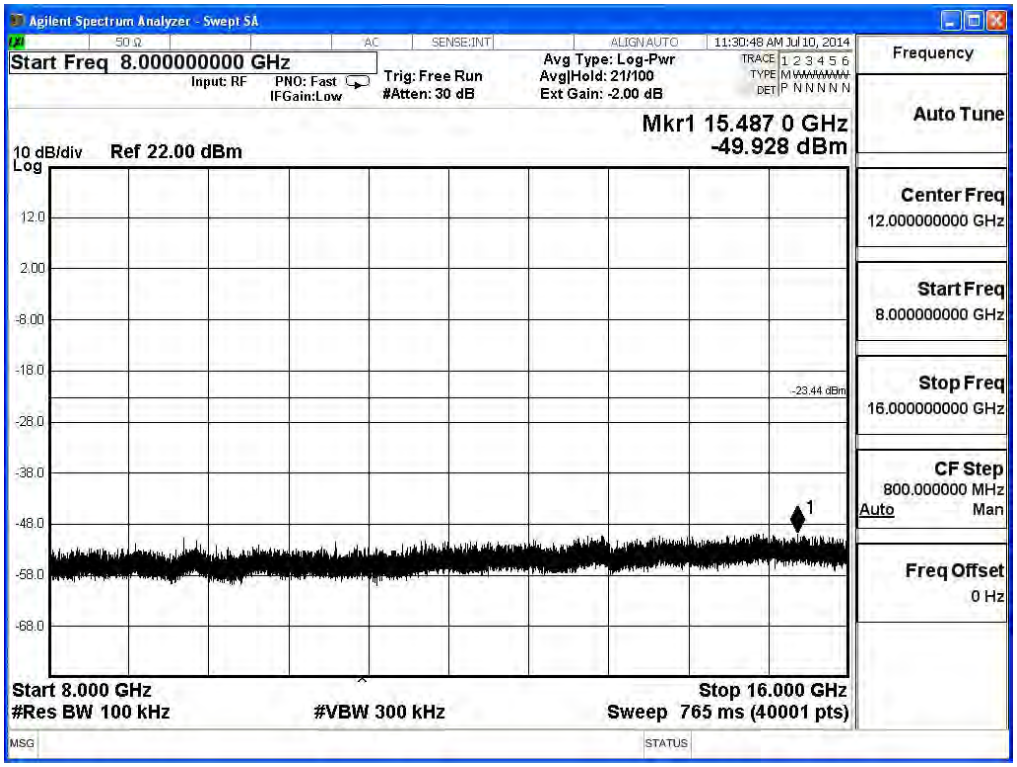
## 2462MHz (30MHz-1GHz)-802.11n(20MHz) (Ant 1)



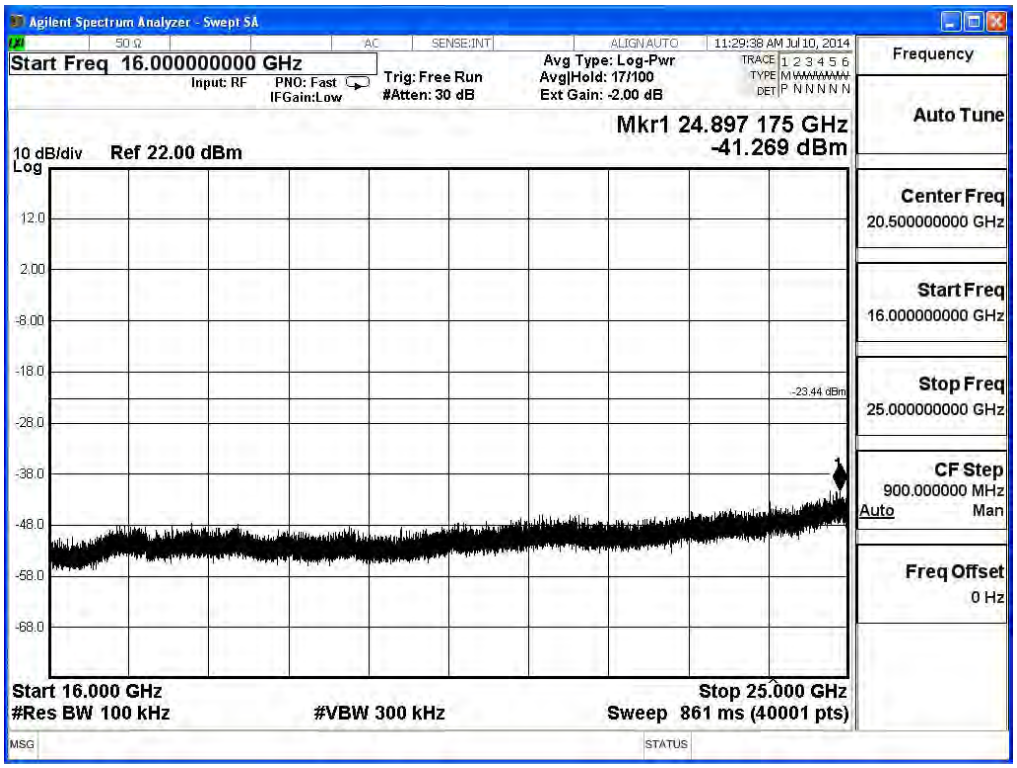

## 2462MHz (1GHz-8GHz) -802.11n(20MHz) (Ant 1)



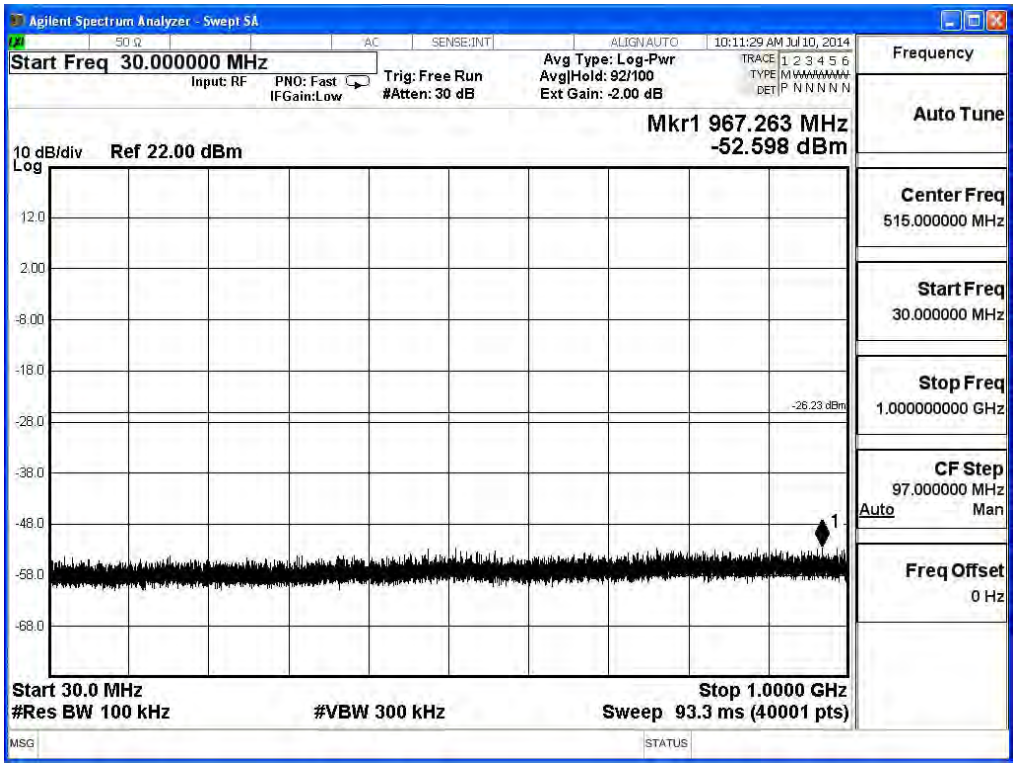
**2462MHz (8GHz-16GHz)-802.11n(20MHz) (Ant 1)**



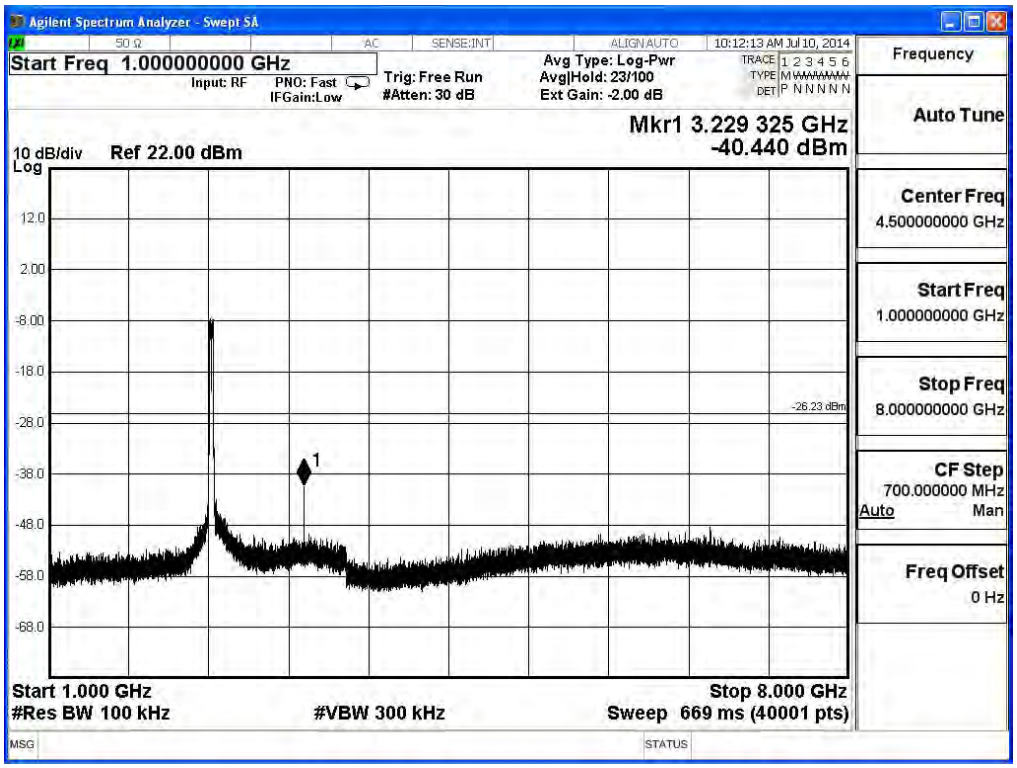

**2462MHz (16GHz-25GHz) -802.11n(20MHz) (Ant 1)**



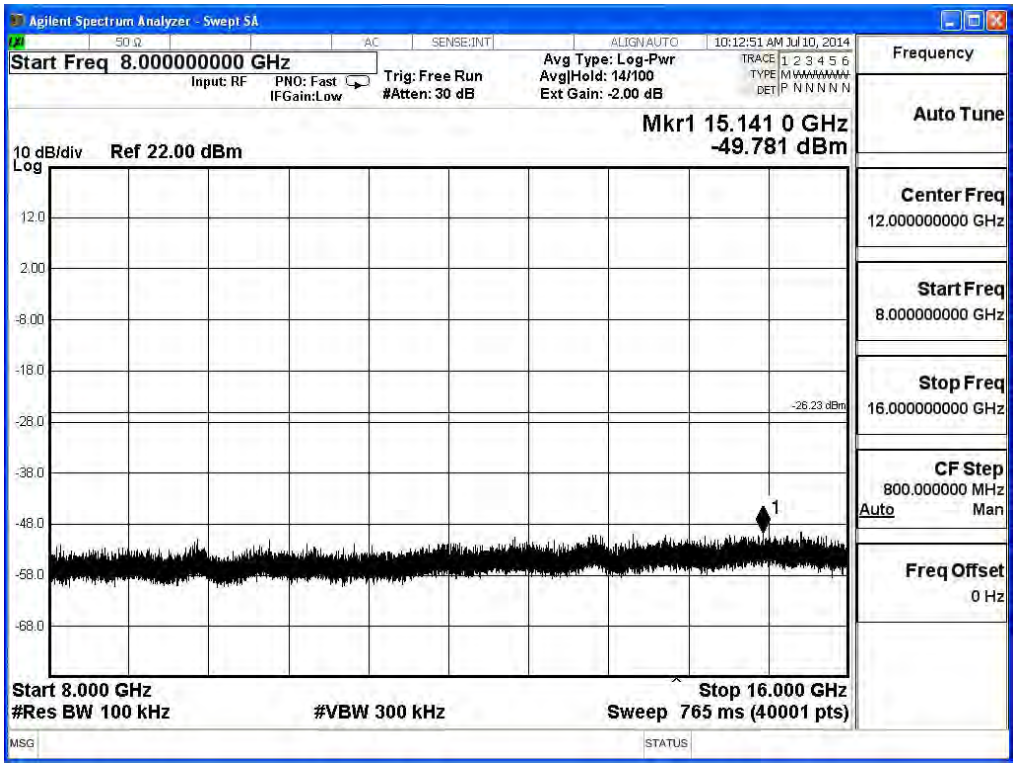
## 2422MHz (30MHz-1GHz)-802.11n(40MHz) (Ant 0)



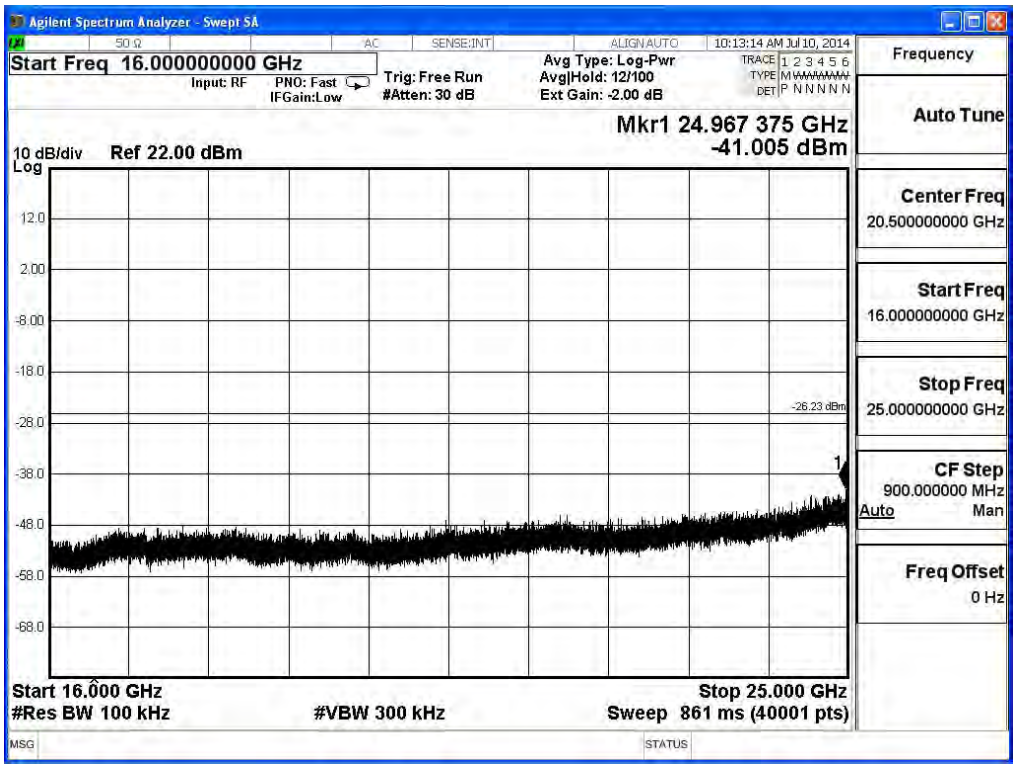

## 2422MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 0)



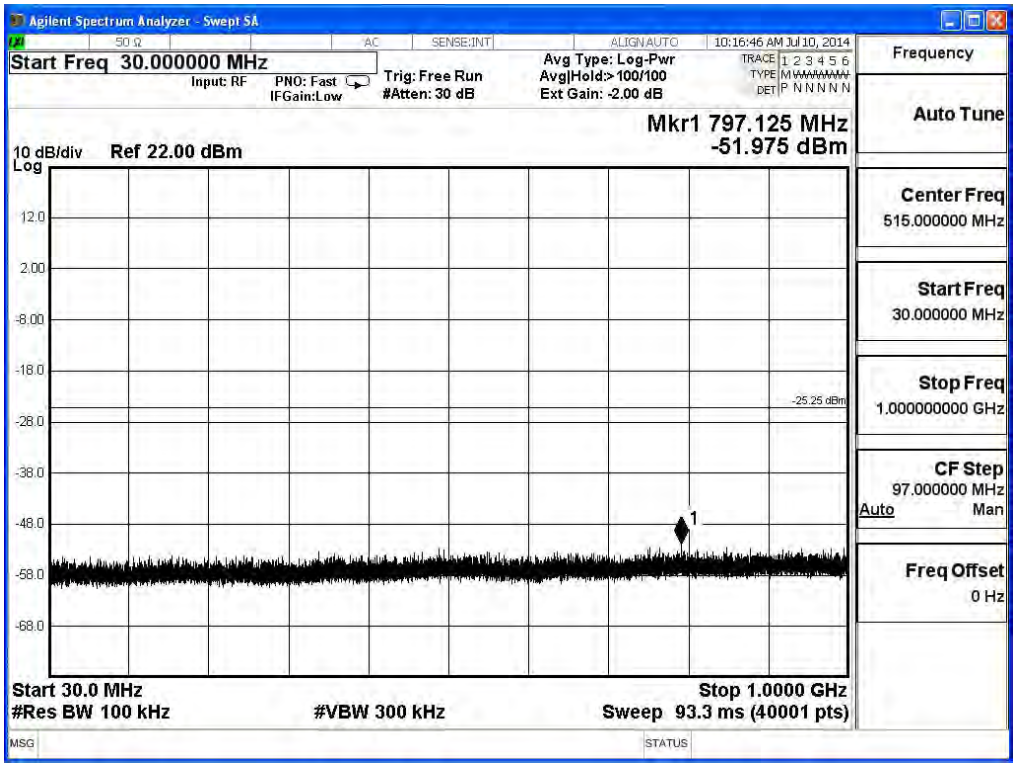
**2422MHz (8GHz-16GHz)-802.11n(40MHz) (Ant 0)**



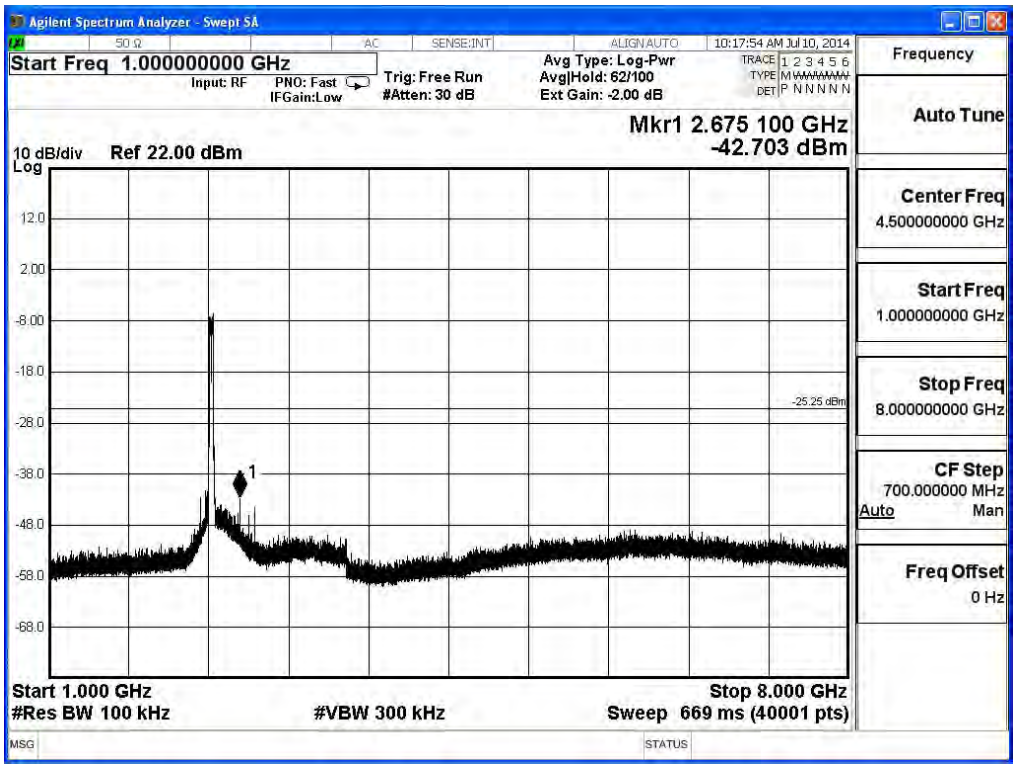

**2422MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 0)**



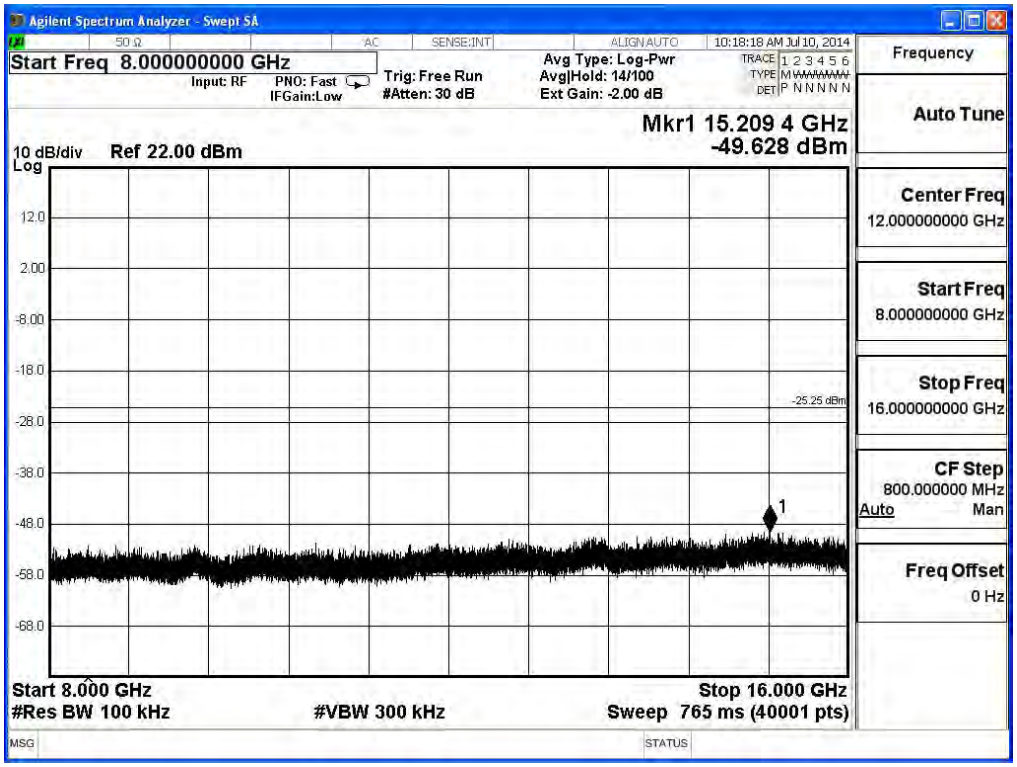
## 2422MHz (30MHz-1GHz)-802.11n(40MHz) (Ant 1)



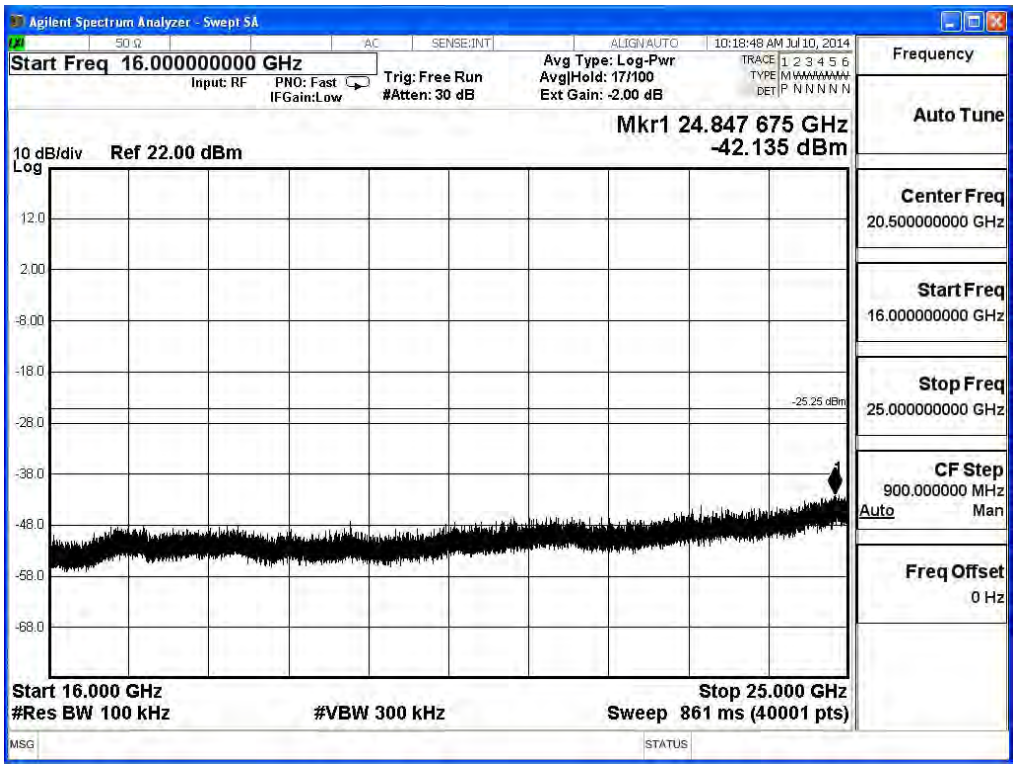

## 2422MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 1)



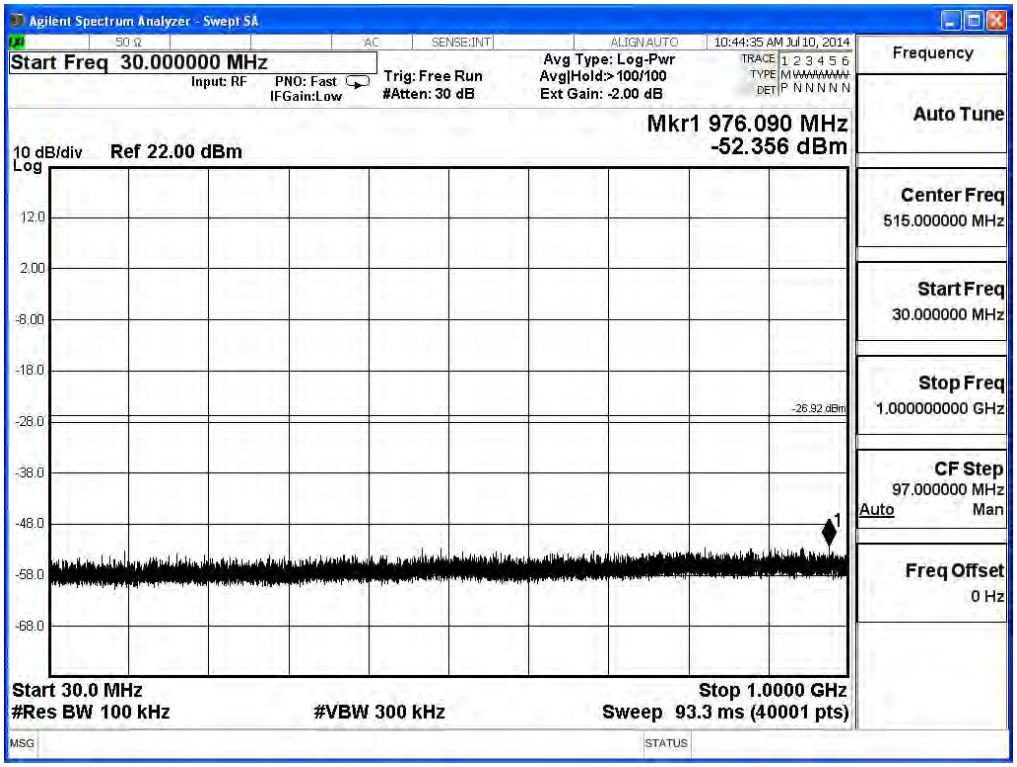
## 2422MHz (8GHz-16GHz)-802.11n(40MHz) (Ant 1)



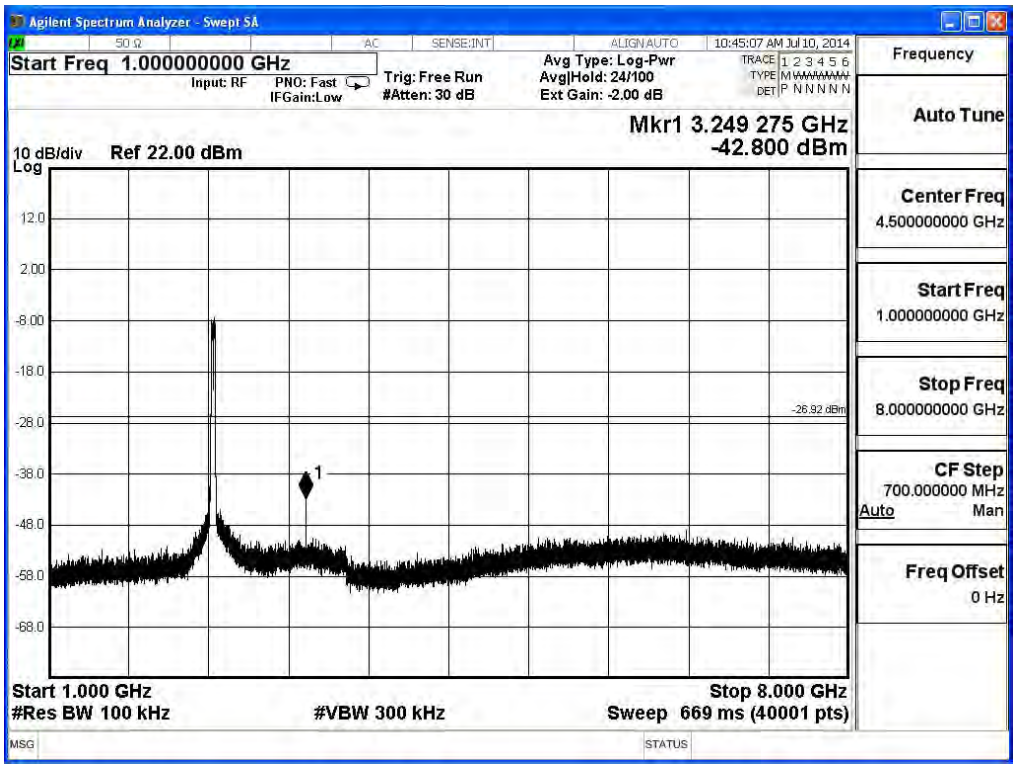

## 2422MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 1)



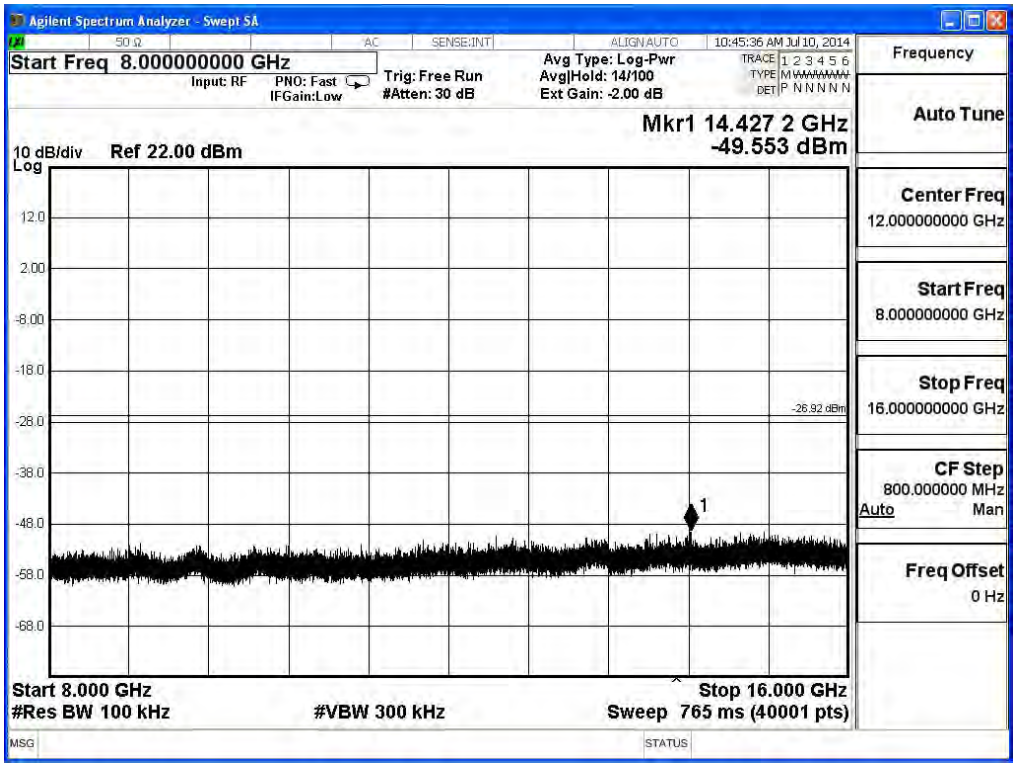
**2437MHz (30MHz-1GHz) -802.11n(40MHz) (Ant 0)**



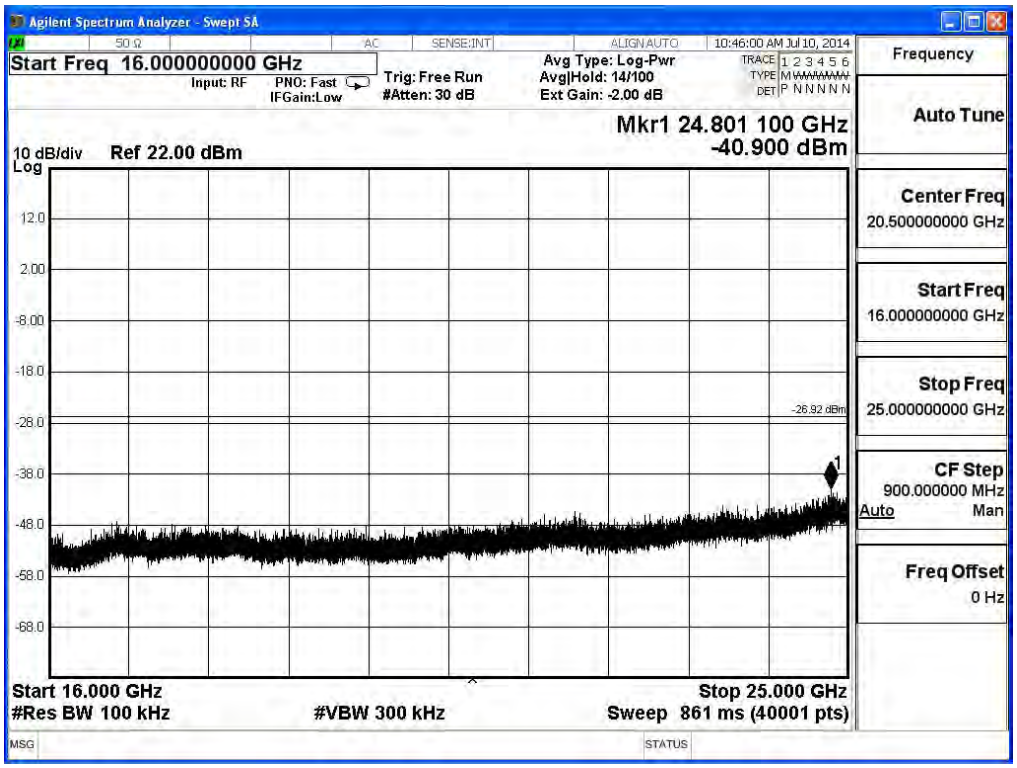

**2437MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 0)**



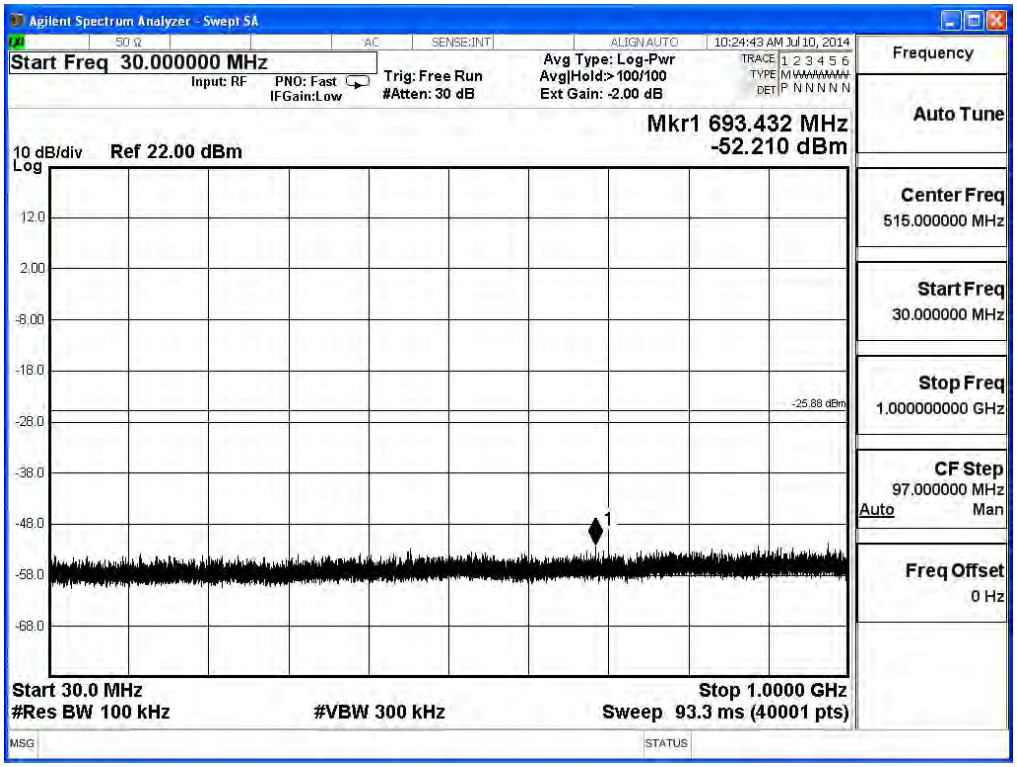
**2437MHz (8GHz-16GHz) -802.11n(40MHz) (Ant 0)**



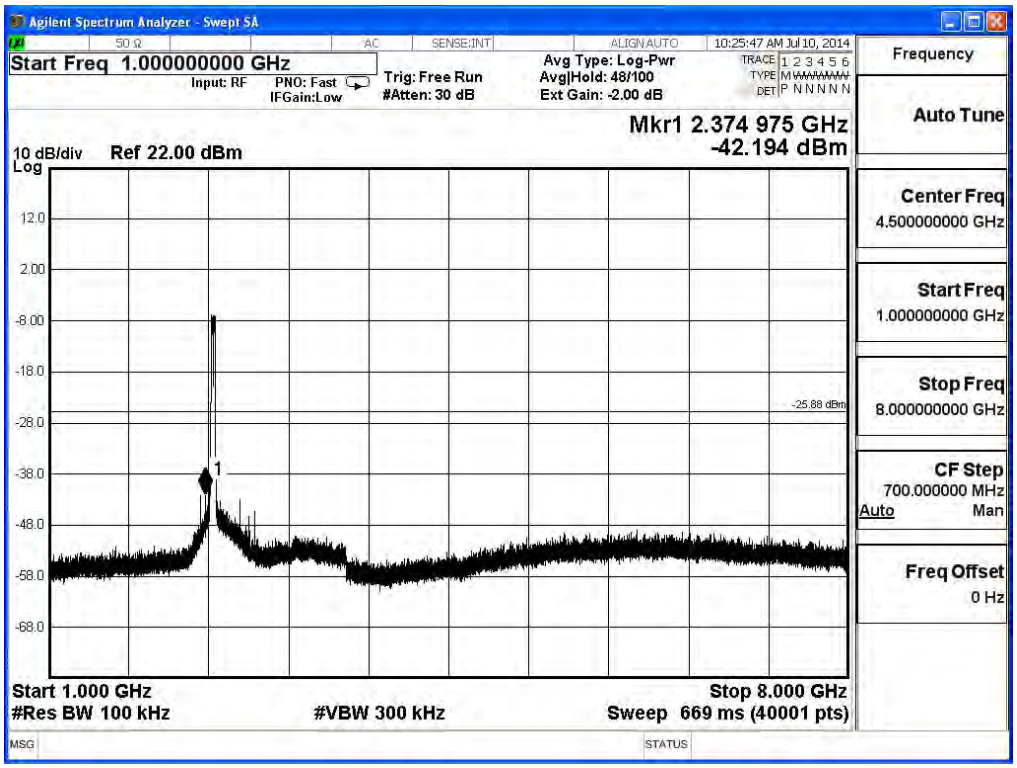

**2437MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 0)**



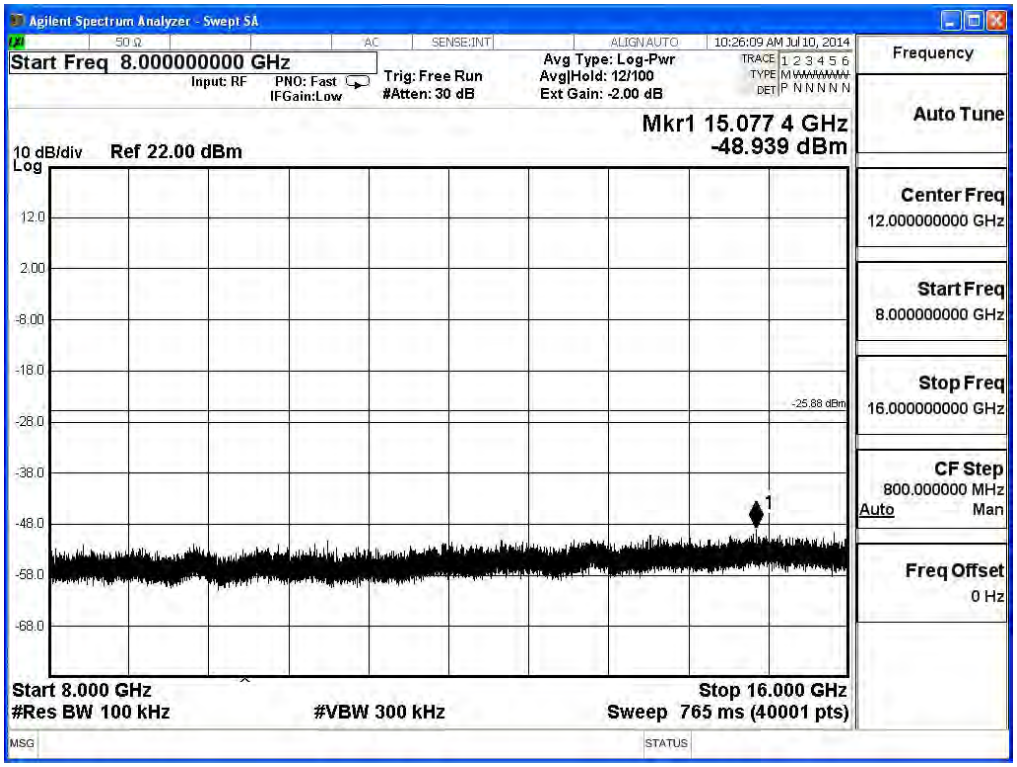
## 2437MHz (30MHz-1GHz) -802.11n(40MHz) (Ant 1)



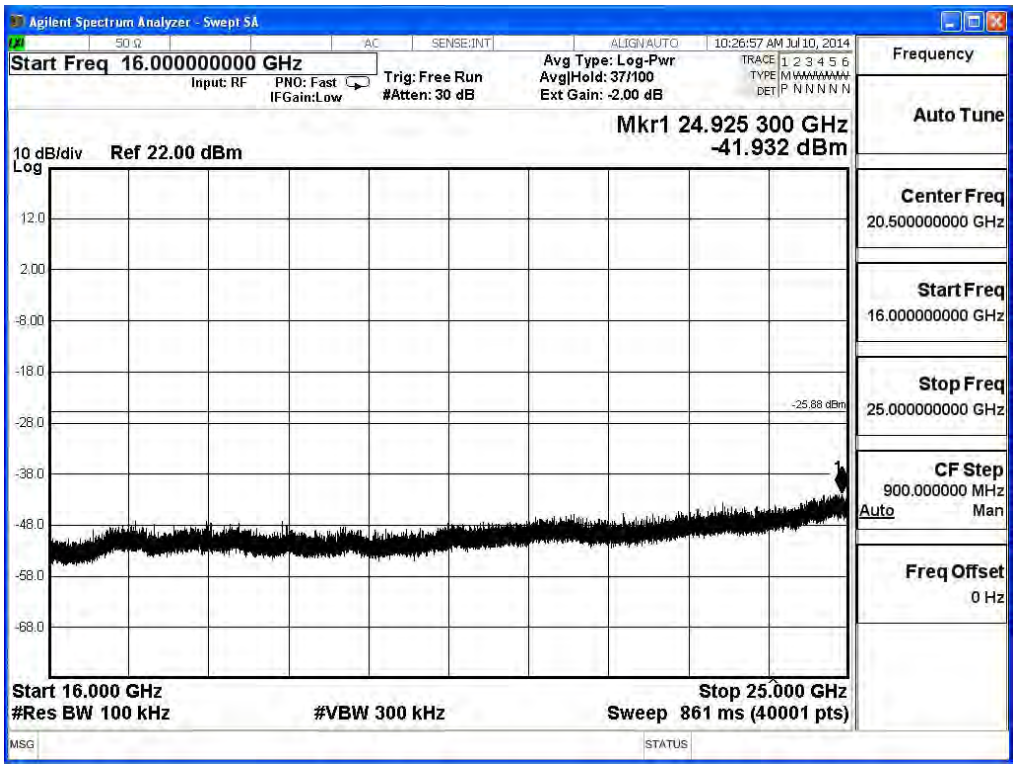

## 2437MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 1)



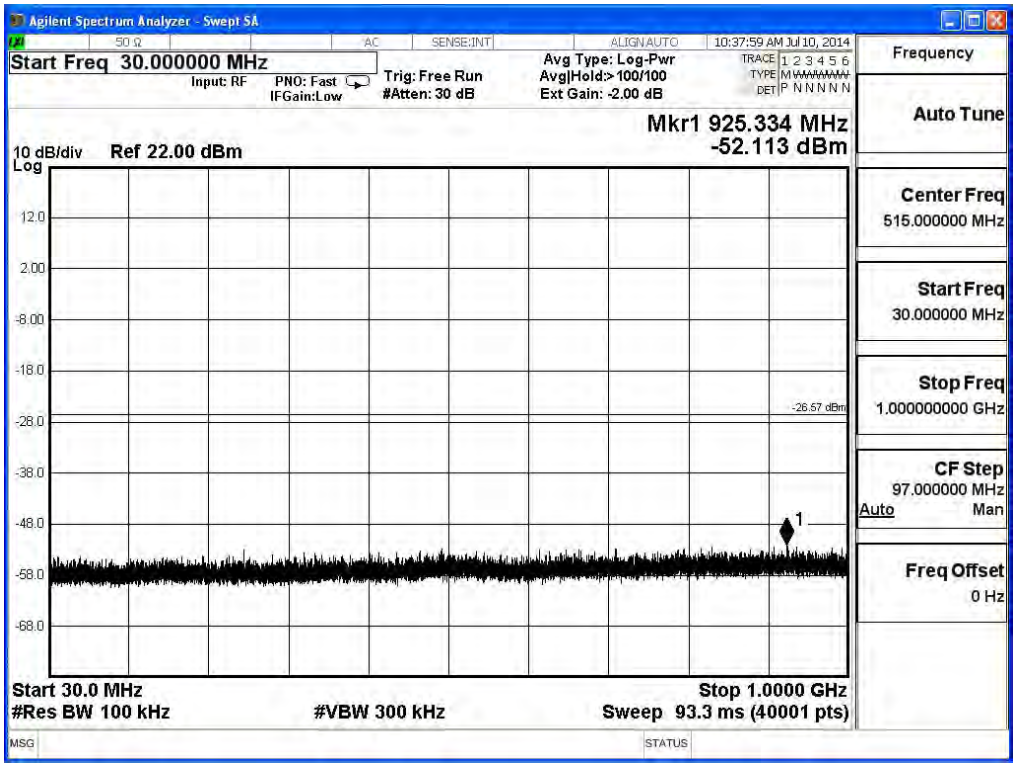
**2437MHz (8GHz-16GHz) -802.11n(40MHz) (Ant 1)**



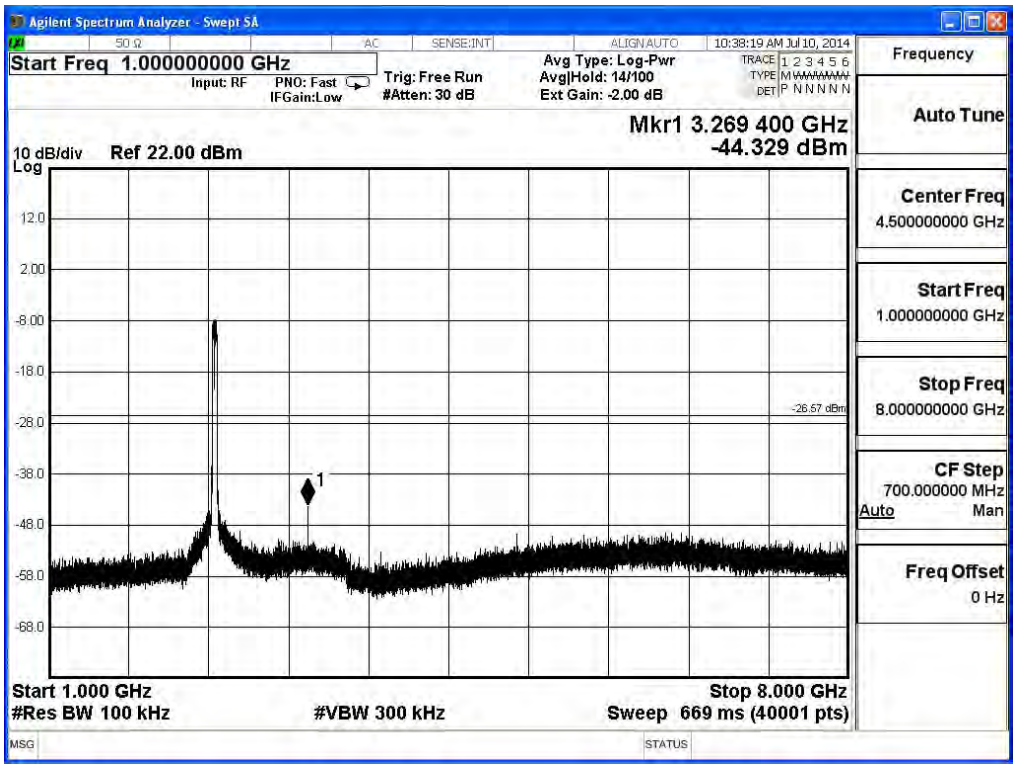

**2437MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 1)**



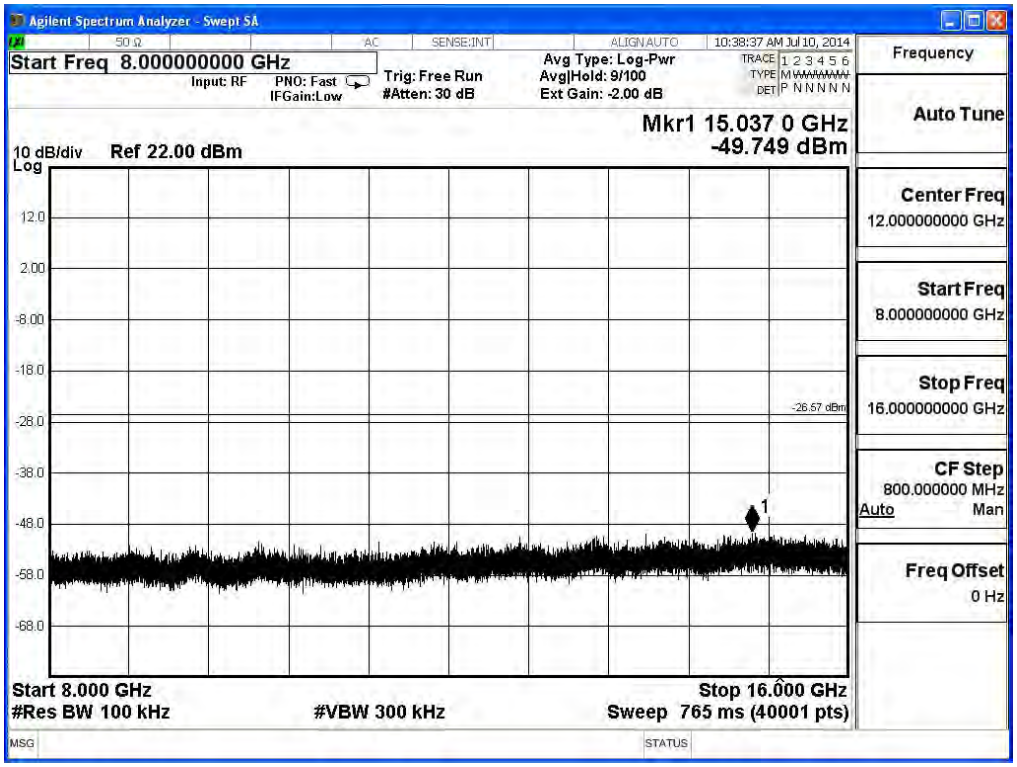
## 2452MHz (30MHz-1GHz)-802.11n(40MHz) (Ant 0)



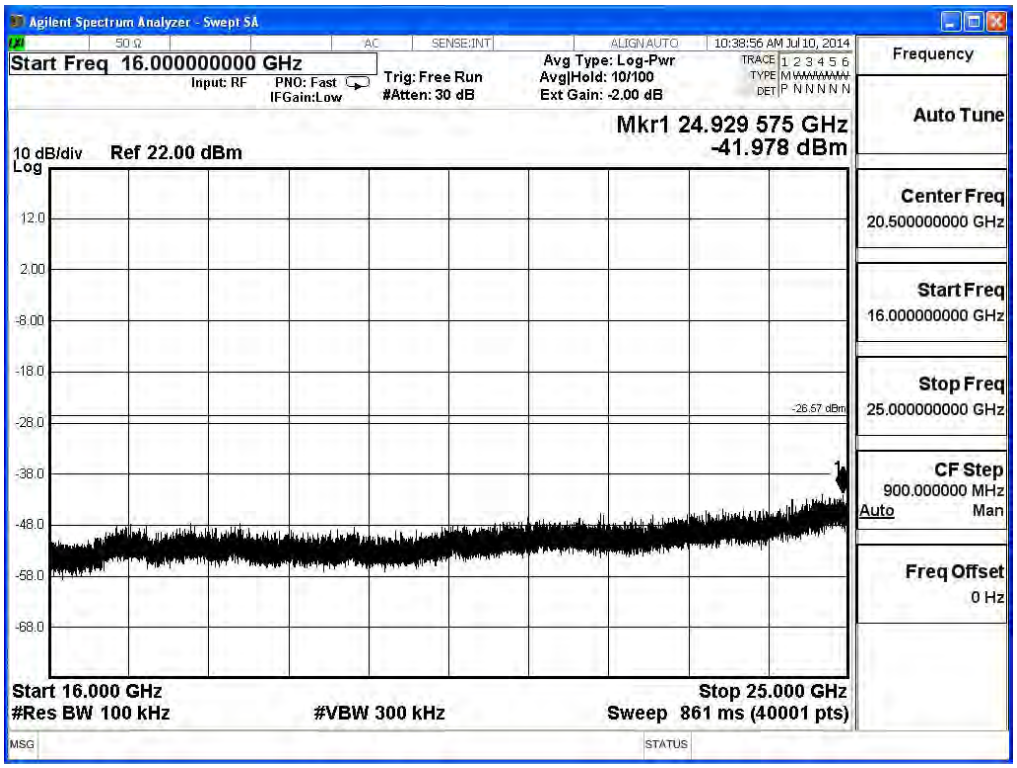

## 2452MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 0)



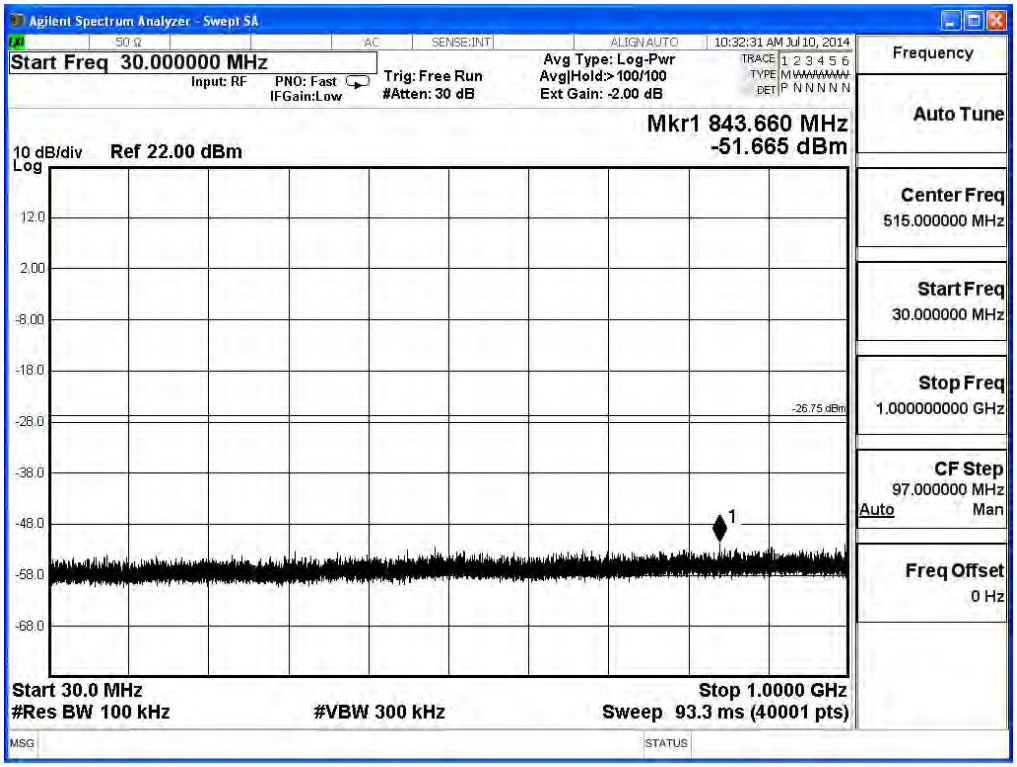
**2452MHz (8GHz-16GHz)-802.11n(40MHz) (Ant 0)**



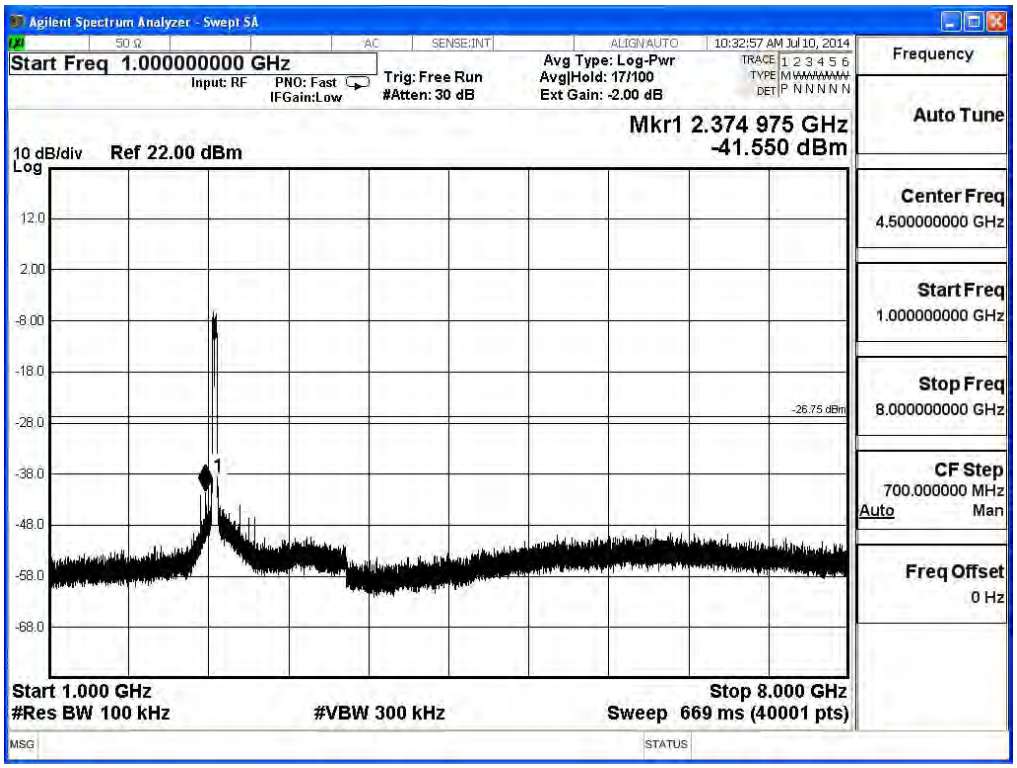

**2452MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 0)**



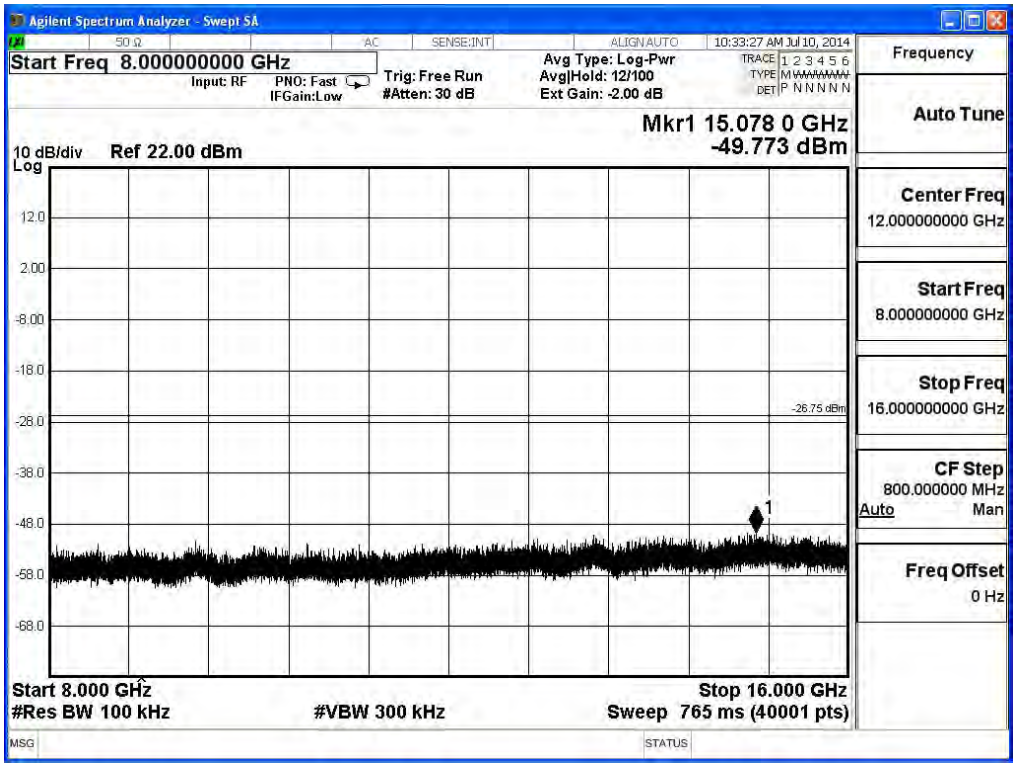
## 2452MHz (30MHz-1GHz)-802.11n(40MHz) (Ant 1)



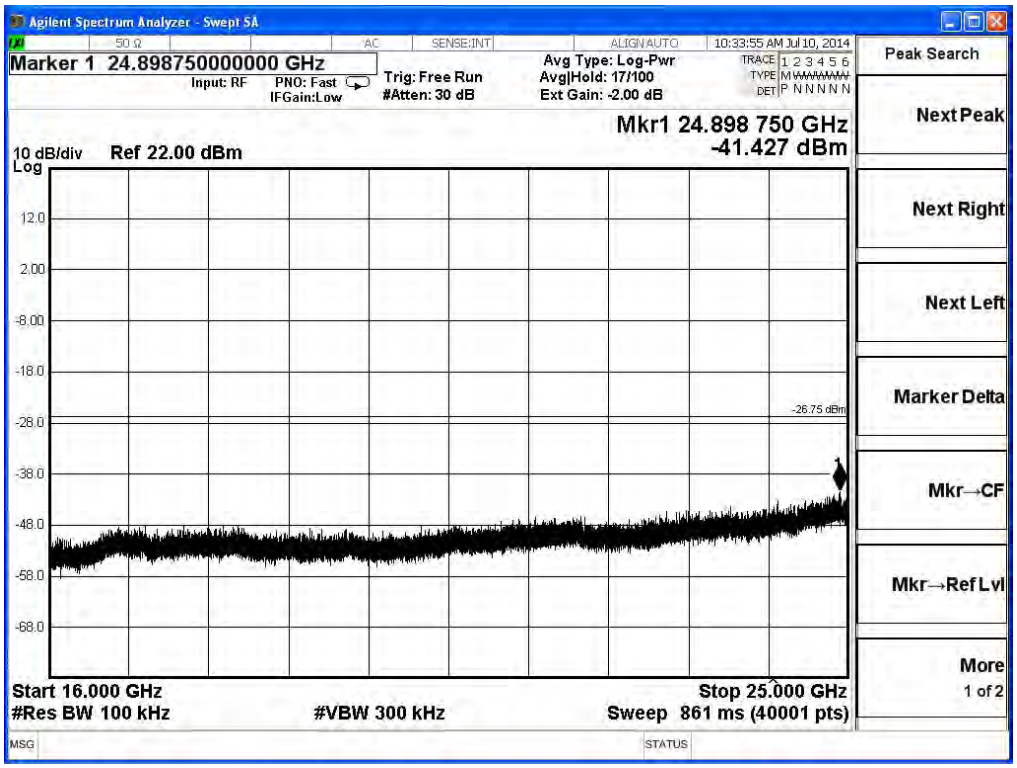

## 2452MHz (1GHz-8GHz) -802.11n(40MHz) (Ant 1)



**2452MHz (8GHz-16GHz)-802.11n(40MHz) (Ant 1)**




**2452MHz (16GHz-25GHz) -802.11n(40MHz) (Ant 1)**



# 6. Radiated Emission Band Edge

## 6.1. Test Equipment

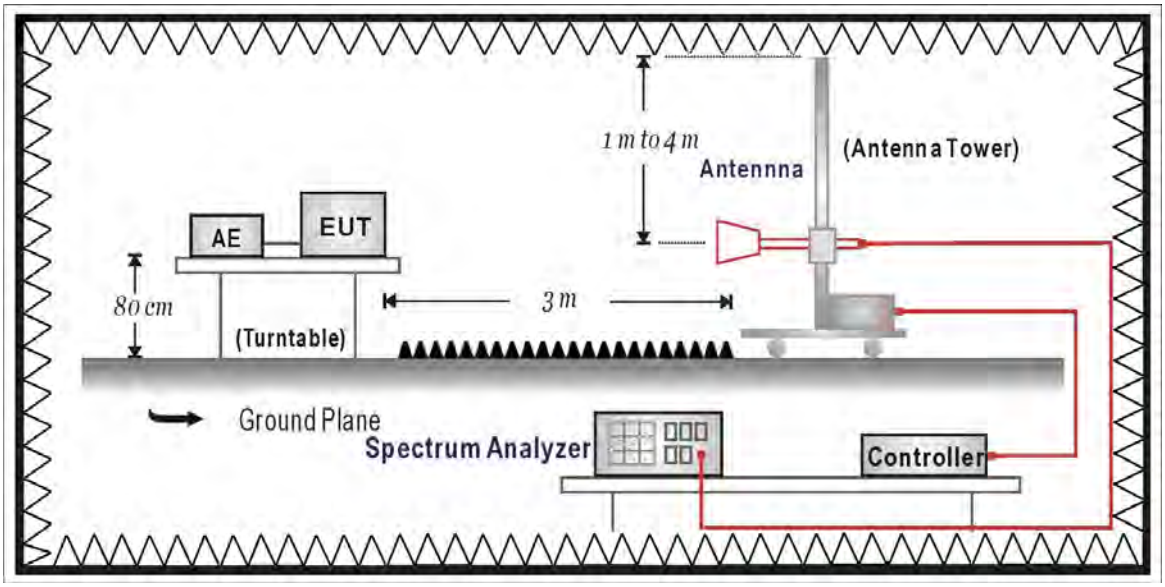
The following test equipments are used during the test:

Radiated Emission Band Edge / CB1

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Double Ridged Guide Horn Antenna | Schwarzback | BBHA 9120 | D743 | 2015/02/12 |
| Spectrum Analyzer | Agilent | E4440A | MY46187335 | 2015/01/12 |
| k Type Cable | Huber Suhner | Sucoflex 102 | 25623/2 | 2015/02/10 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 6.2. Test Setup



## 6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

## 6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

## 6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

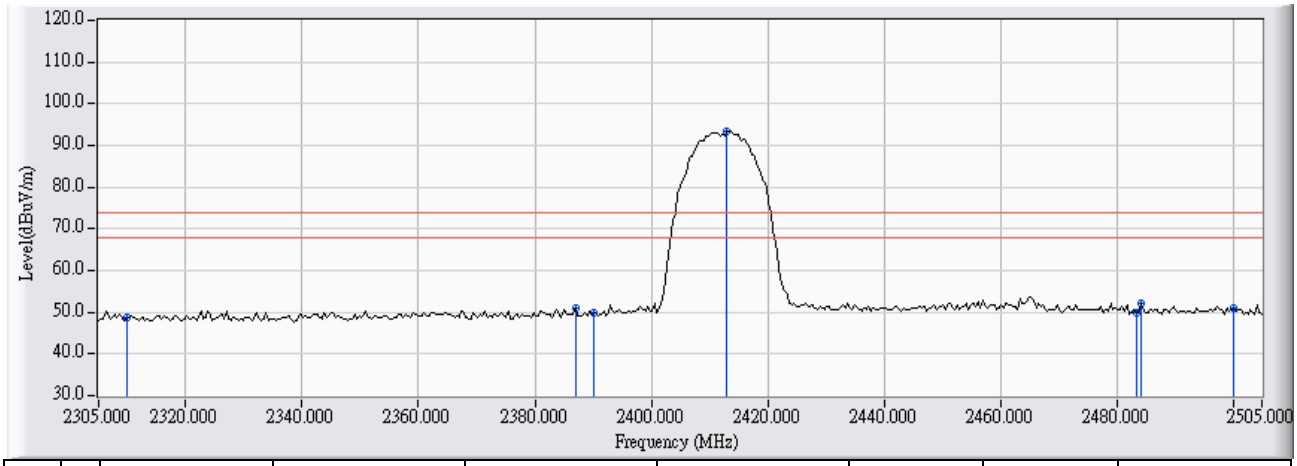
## 6.6. Uncertainty

The measurement uncertainty
± 3.9 dB above 1GHz

## 6.7. Test Result

**Radiated is defined as**

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:36** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ch1** |

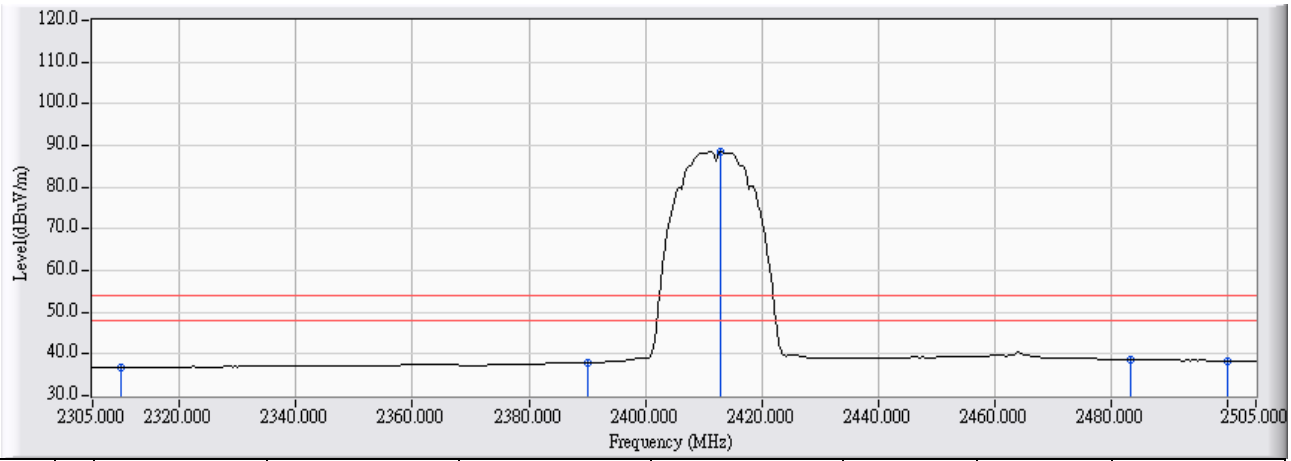



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.169 | 48.616 | -25.384 | 74.000 | PEAK |
| 2 | | 2387.000 | 26.666 | 24.508 | 51.174 | -22.826 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 23.025 | 49.699 | -24.301 | 74.000 | PEAK |
| 4 | * | 2413.000 | 26.740 | 66.620 | 93.360 | 19.360 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 23.047 | 49.987 | -24.013 | 74.000 | PEAK |
| 6 | | 2484.200 | 26.942 | 25.348 | 52.290 | -21.710 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 23.872 | 50.860 | -23.140 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:38** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ch1** |

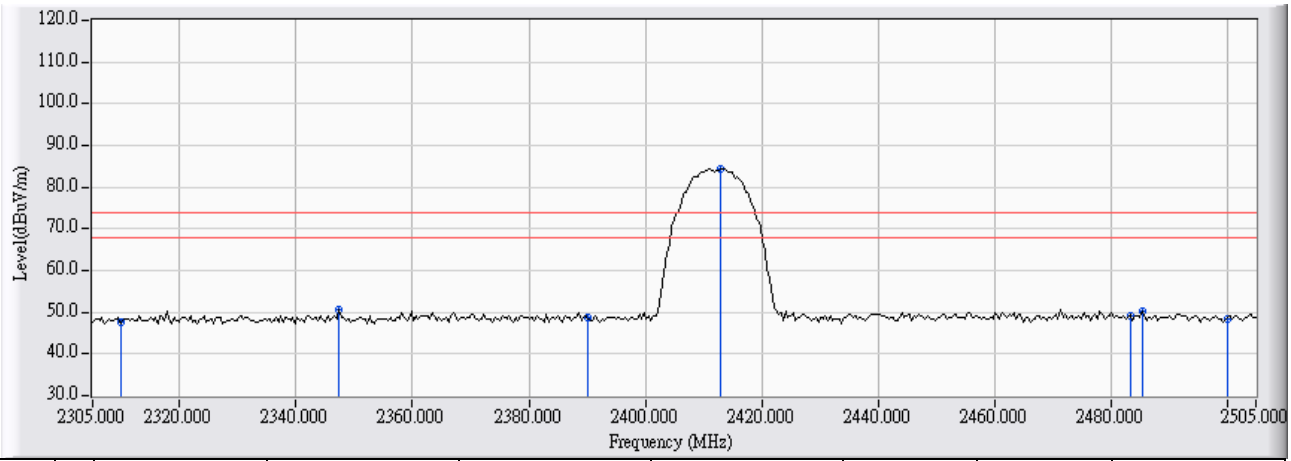



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.392 | 36.839 | -17.161 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 11.284 | 37.958 | -16.042 | 54.000 | AVERAGE |
| 3 | * | 2413.000 | 26.740 | 61.935 | 88.675 | 34.675 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 11.538 | 38.478 | -15.522 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 11.335 | 38.323 | -15.677 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:08** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ch1** |

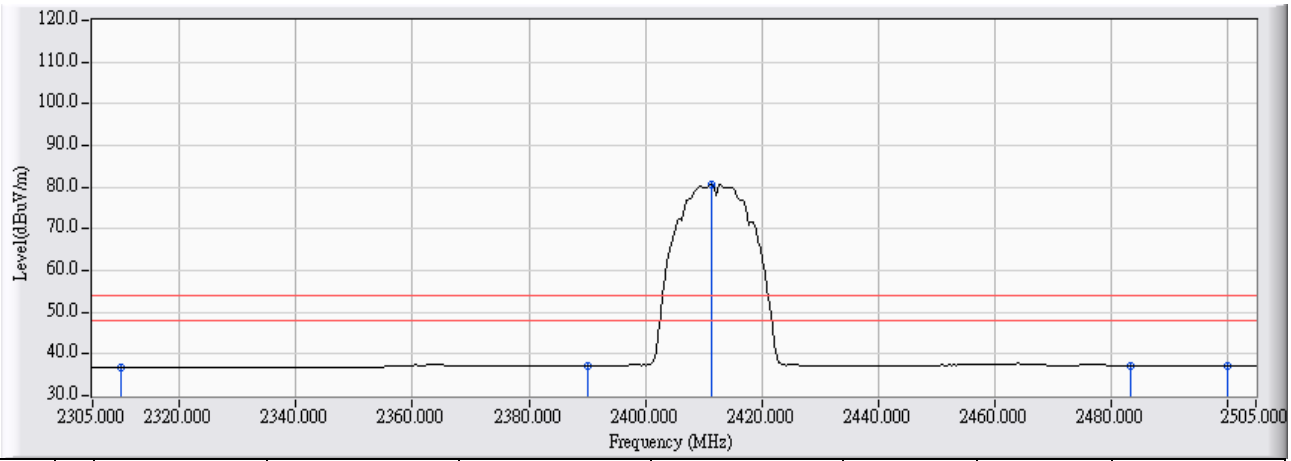



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 21.313 | 47.760 | -26.240 | 74.000 | PEAK |
| 2 | | 2347.400 | 26.554 | 23.938 | 50.492 | -23.508 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 21.985 | 48.659 | -25.341 | 74.000 | PEAK |
| 4 | * | 2413.000 | 26.740 | 57.691 | 84.431 | 10.431 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 22.076 | 49.016 | -24.984 | 74.000 | PEAK |
| 6 | | 2485.400 | 26.945 | 23.276 | 50.221 | -23.779 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 21.499 | 48.487 | -25.513 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:05** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ch1** |

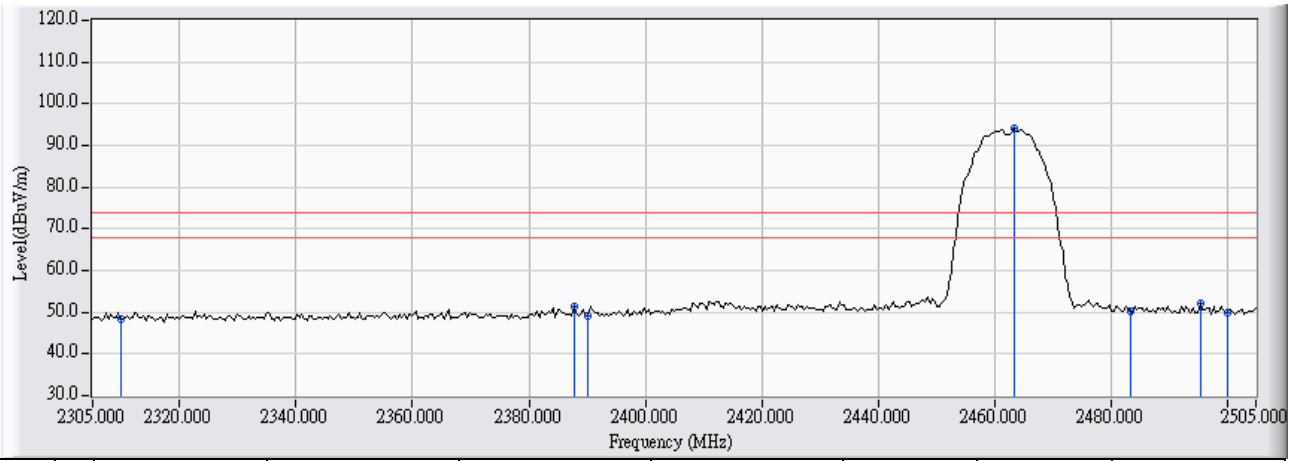



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.240 | 36.687 | -17.313 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 10.467 | 37.141 | -16.859 | 54.000 | AVERAGE |
| 3 | * | 2411.400 | 26.735 | 53.903 | 80.638 | 26.638 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 10.326 | 37.266 | -16.734 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 10.202 | 37.190 | -16.810 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:42** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ch11** |

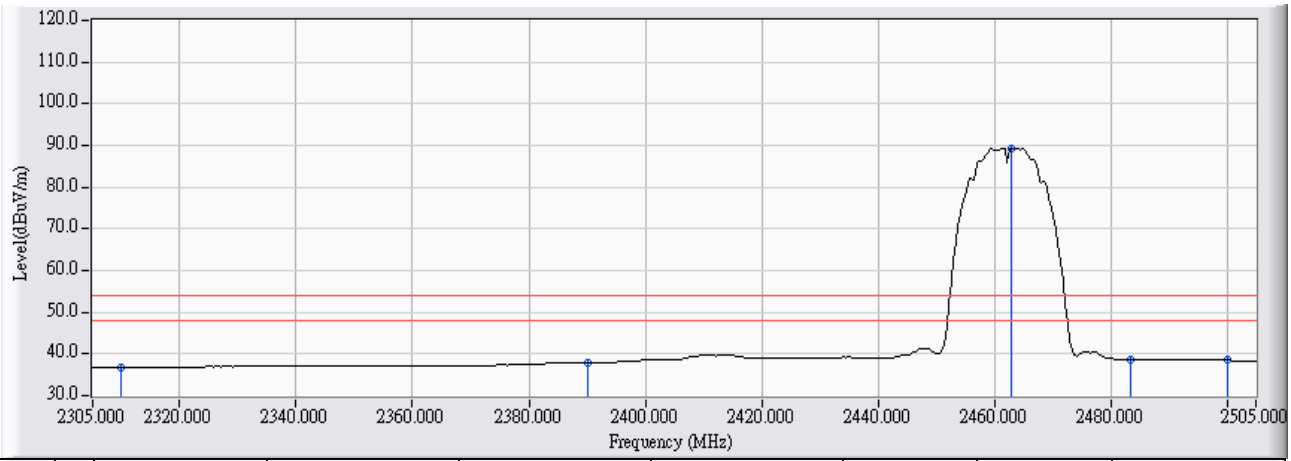



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 21.975 | 48.422 | -25.578 | 74.000 | PEAK |
| 2 | | 2387.800 | 26.668 | 24.590 | 51.258 | -22.742 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 22.619 | 49.293 | -24.707 | 74.000 | PEAK |
| 4 | * | 2463.400 | 26.883 | 67.111 | 93.994 | 19.994 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 23.199 | 50.139 | -23.861 | 74.000 | PEAK |
| 6 | | 2495.400 | 26.973 | 25.074 | 52.048 | -21.952 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 22.956 | 49.944 | -24.056 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:41** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ ch11** |

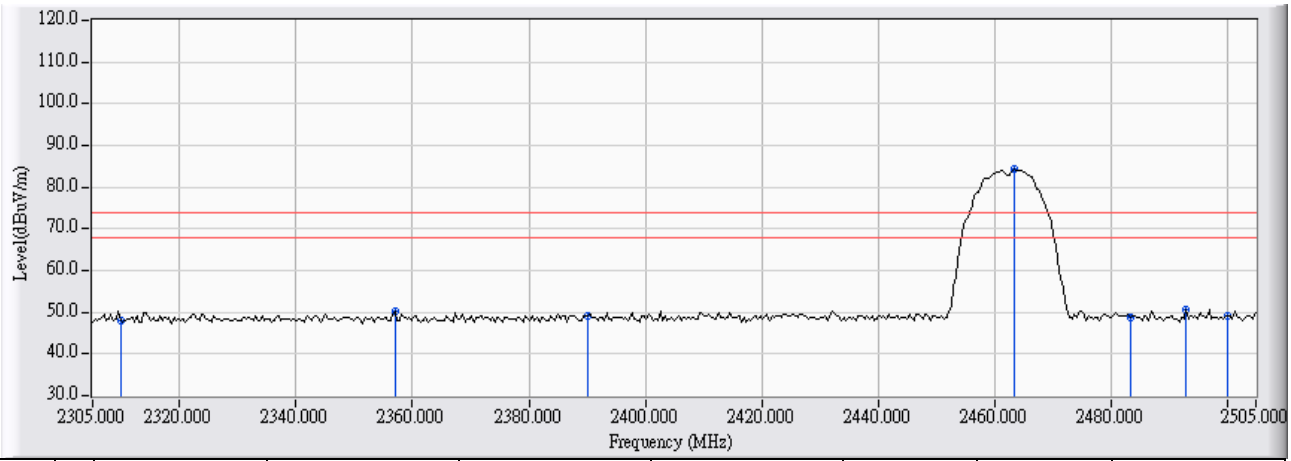



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.418 | 36.865 | -17.135 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 11.255 | 37.929 | -16.071 | 54.000 | AVERAGE |
| 3 | * | 2463.000 | 26.882 | 62.548 | 89.430 | 35.430 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 11.671 | 38.611 | -15.389 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 11.492 | 38.480 | -15.520 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:11** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ ch11** |

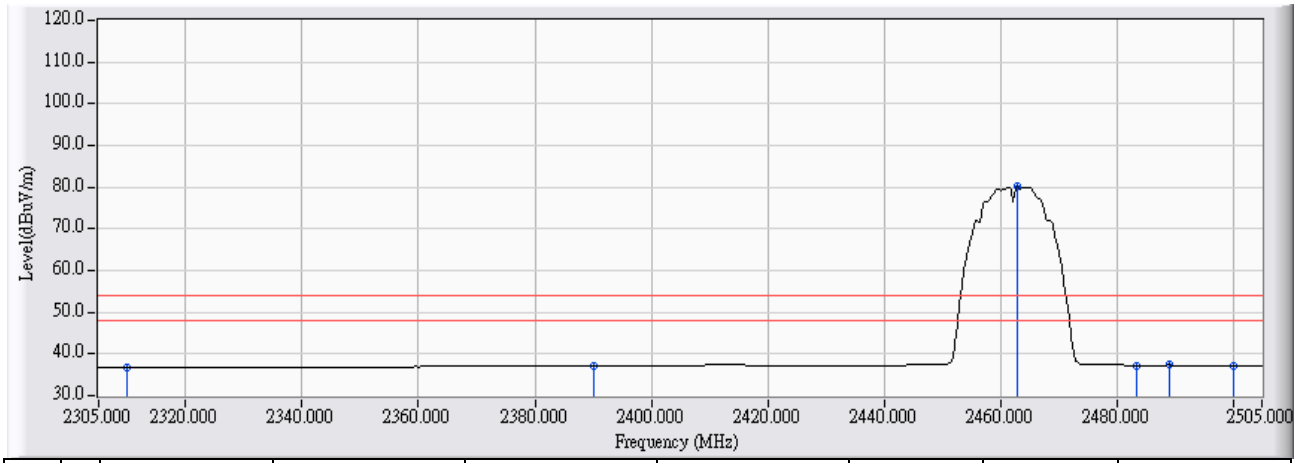



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 21.467 | 47.914 | -26.086 | 74.000 | PEAK |
| 2 | | 2357.000 | 26.580 | 23.691 | 50.272 | -23.728 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 22.539 | 49.213 | -24.787 | 74.000 | PEAK |
| 4 | * | 2463.400 | 26.883 | 57.324 | 84.207 | 10.207 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 21.814 | 48.754 | -25.246 | 74.000 | PEAK |
| 6 | | 2493.000 | 26.967 | 23.685 | 50.652 | -23.348 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 22.256 | 49.244 | -24.756 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:13** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11b_ ch11** |

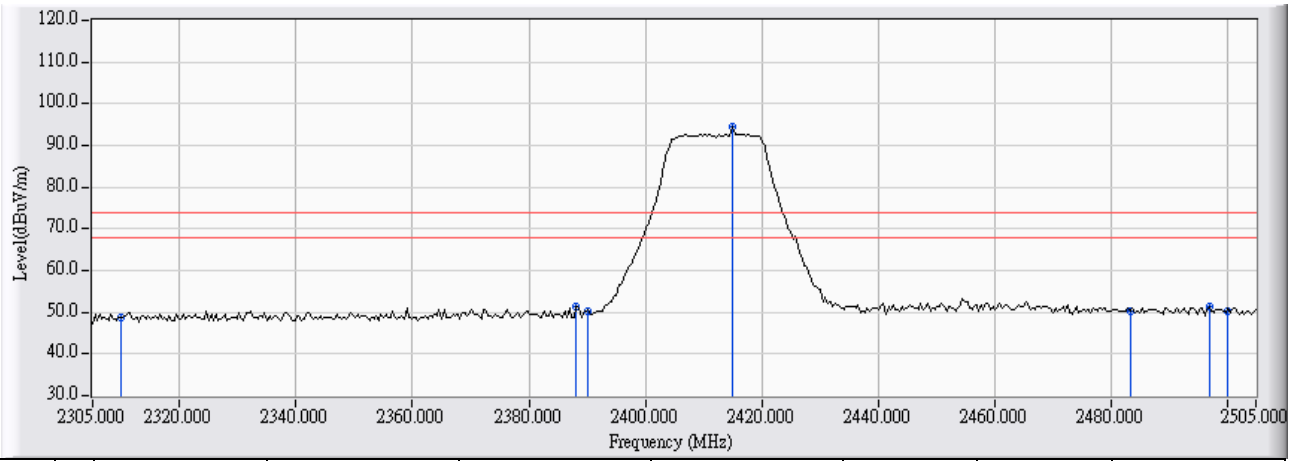



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.294 | 36.741 | -17.259 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 10.418 | 37.092 | -16.908 | 54.000 | AVERAGE |
| 3 | * | 2463.000 | 26.882 | 53.191 | 80.073 | 26.073 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 10.359 | 37.299 | -16.701 | 54.000 | AVERAGE |
| 5 | | 2489.000 | 26.956 | 10.371 | 37.327 | -16.673 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 10.266 | 37.254 | -16.746 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:33** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch1** |

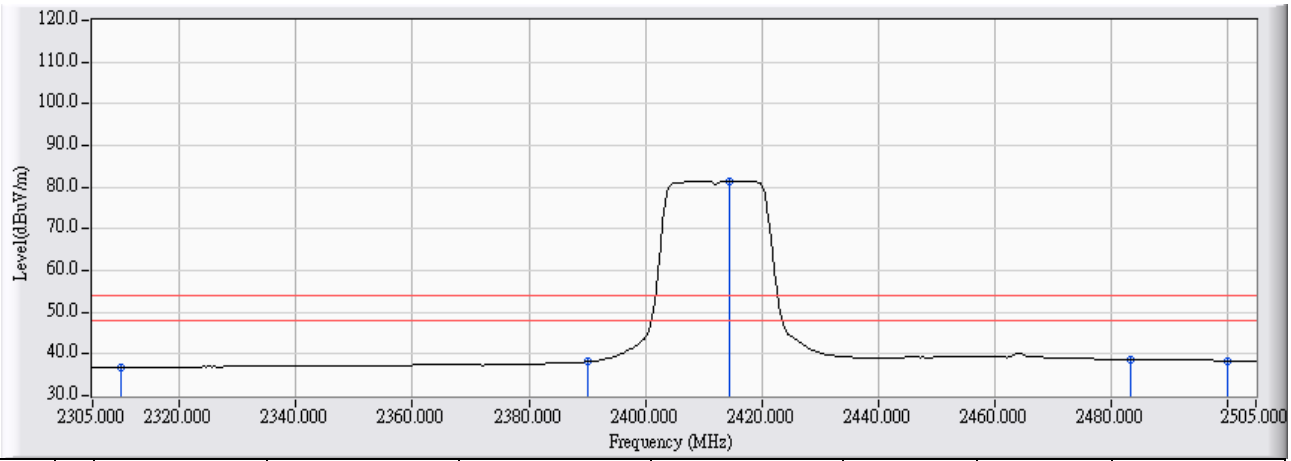



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.284 | 48.731 | -25.269 | 74.000 | PEAK |
| 2 | | 2388.200 | 26.669 | 24.679 | 51.348 | -22.652 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 23.598 | 50.272 | -23.728 | 74.000 | PEAK |
| 4 | * | 2415.000 | 26.745 | 67.716 | 94.461 | 20.461 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 23.491 | 50.431 | -23.569 | 74.000 | PEAK |
| 6 | | 2497.000 | 26.979 | 24.234 | 51.213 | -22.787 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 23.388 | 50.376 | -23.624 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:31** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch1** |

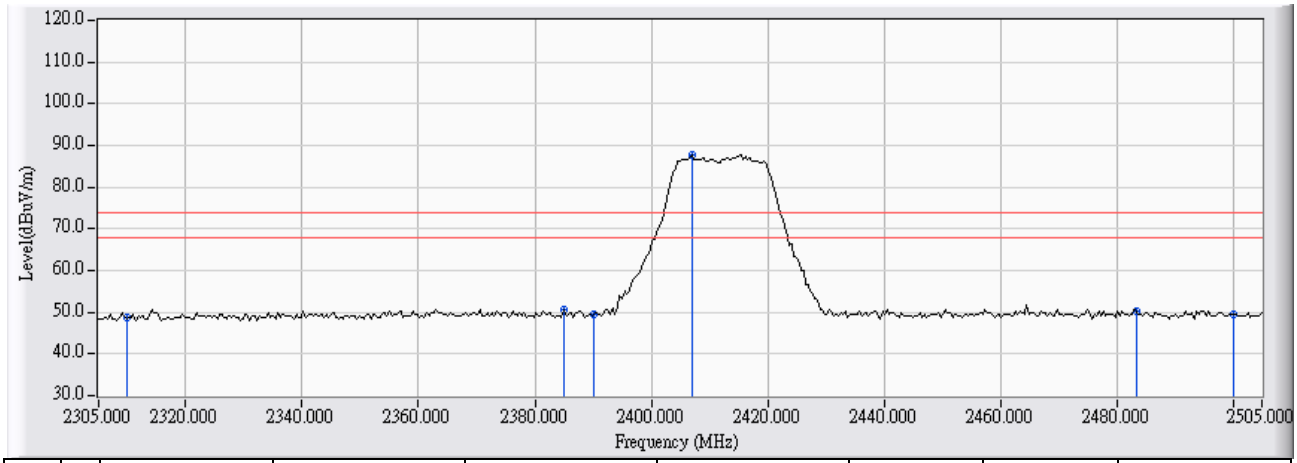



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.418 | 36.865 | -17.135 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 11.422 | 38.096 | -15.904 | 54.000 | AVERAGE |
| 3 | * | 2414.600 | 26.745 | 54.760 | 81.504 | 27.504 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 11.578 | 38.518 | -15.482 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 11.396 | 38.384 | -15.616 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 17:19** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch1** |

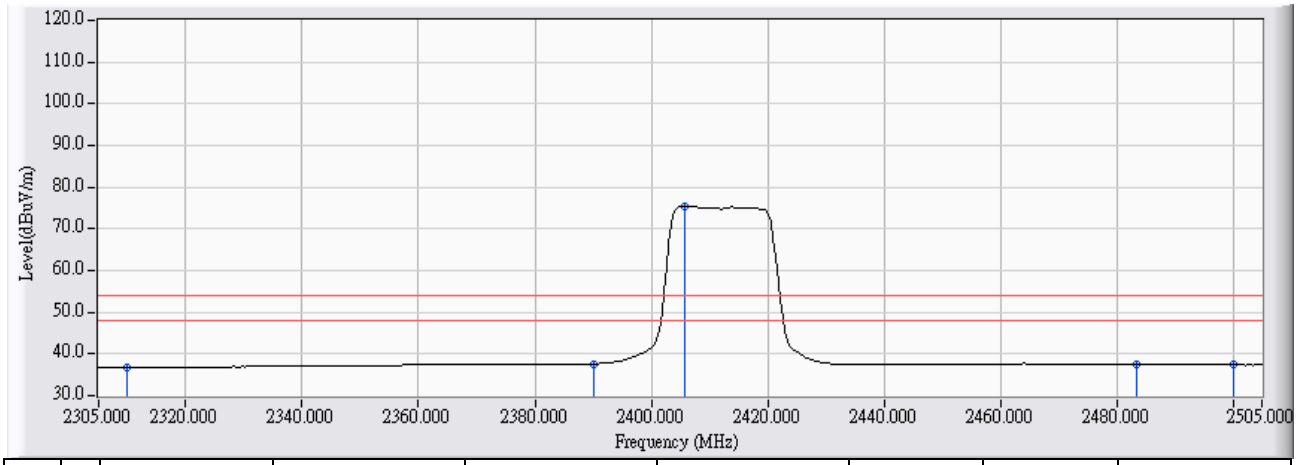



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.201 | 48.648 | -25.352 | 74.000 | PEAK |
| 2 | | 2385.000 | 26.660 | 24.015 | 50.675 | -23.325 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 22.703 | 49.377 | -24.623 | 74.000 | PEAK |
| 4 | * | 2407.000 | 26.722 | 61.020 | 87.743 | 13.743 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 23.213 | 50.153 | -23.847 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 22.549 | 49.537 | -24.463 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Engineer :** | |
| **Site : CB1** | **Time : 2014/08/07 - 17:22** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch1** |

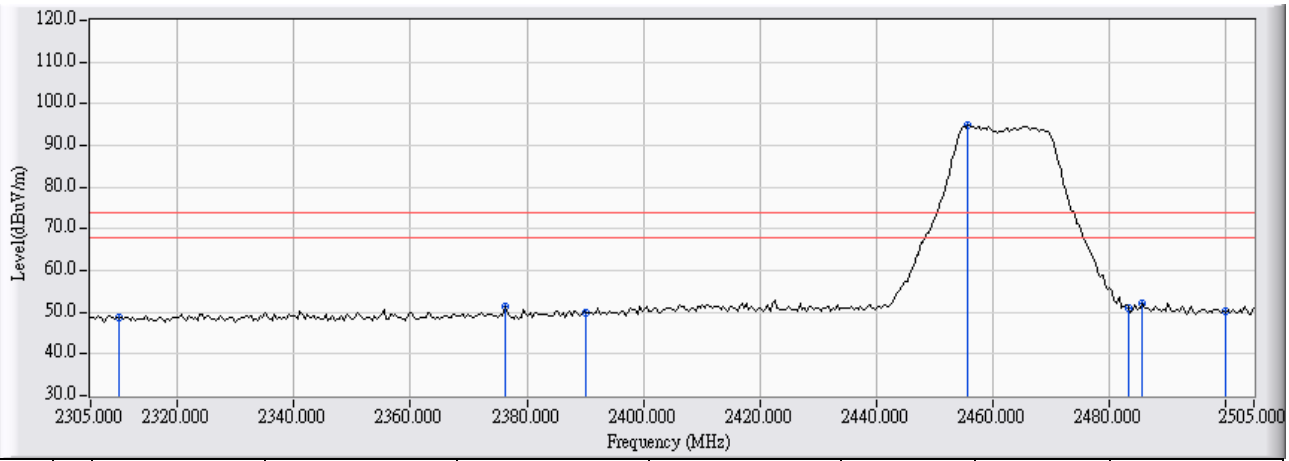



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.390 | 36.837 | -17.163 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 10.909 | 37.583 | -16.417 | 54.000 | AVERAGE |
| 3 | * | 2405.800 | 26.720 | 48.634 | 75.353 | 21.353 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 10.507 | 37.447 | -16.553 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 10.365 | 37.353 | -16.647 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:26** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch11** |

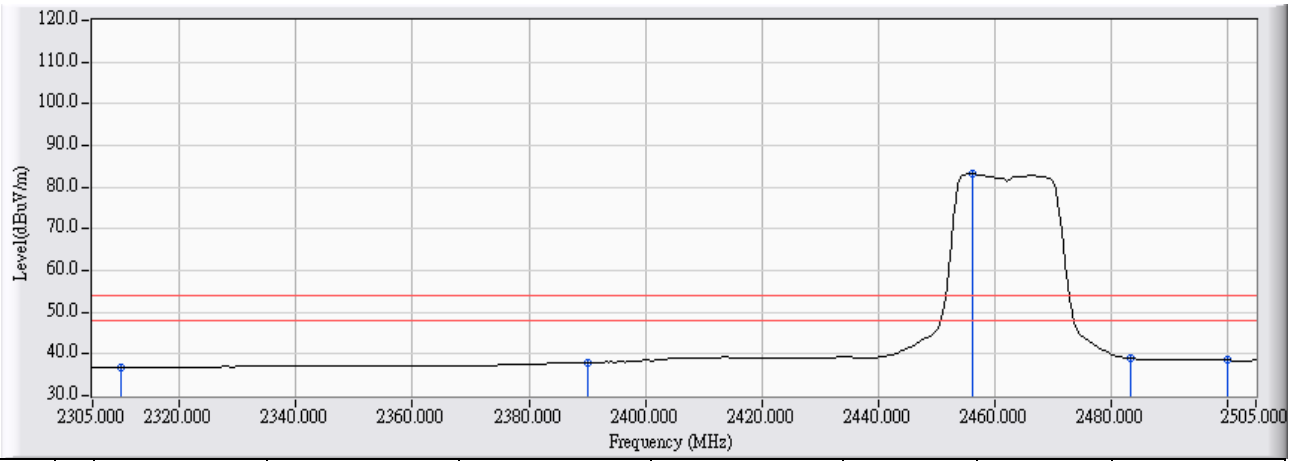



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.205 | 48.652 | -25.348 | 74.000 | PEAK |
| 2 | | 2376.200 | 26.635 | 24.627 | 51.262 | -22.738 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 23.319 | 49.993 | -24.007 | 74.000 | PEAK |
| 4 | * | 2455.800 | 26.862 | 67.975 | 94.836 | 20.836 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 23.940 | 50.880 | -23.120 | 74.000 | PEAK |
| 6 | | 2485.800 | 26.947 | 25.107 | 52.053 | -21.947 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 23.091 | 50.079 | -23.921 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:28** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch11** |

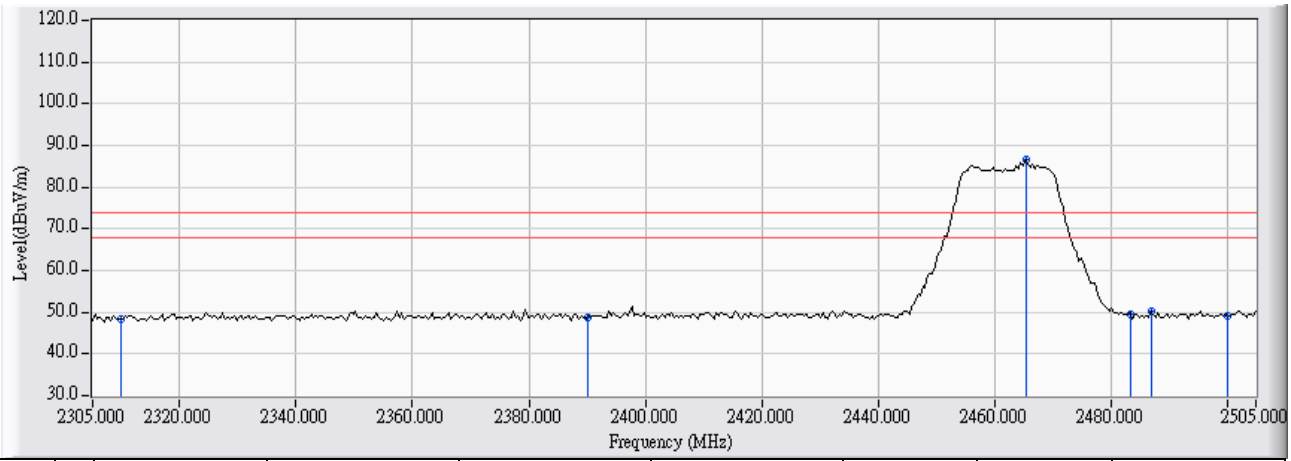



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.406 | 36.853 | -17.147 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 11.259 | 37.933 | -16.067 | 54.000 | AVERAGE |
| 3 | * | 2456.200 | 26.863 | 56.305 | 83.167 | 29.167 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 11.974 | 38.914 | -15.086 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 11.485 | 38.473 | -15.527 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:22** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch11** |

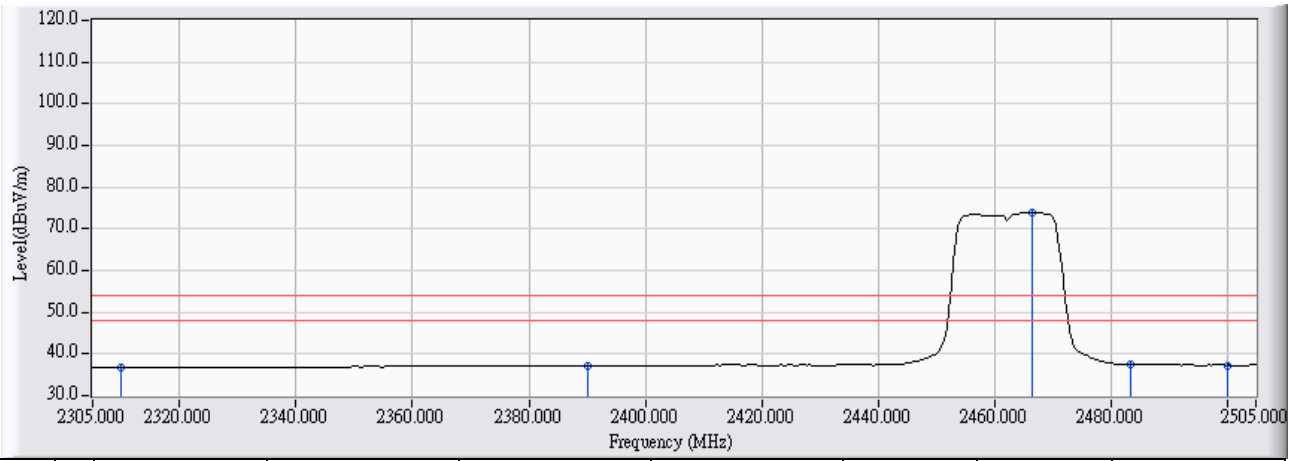



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 21.927 | 48.374 | -25.626 | 74.000 | PEAK |
| 2 | | 2390.000 | 26.674 | 21.969 | 48.643 | -25.357 | 74.000 | PEAK |
| 3 | * | 2465.400 | 26.888 | 59.631 | 86.520 | 12.520 | 74.000 | PEAK |
| 4 | | 2483.500 | 26.940 | 22.690 | 49.630 | -24.370 | 74.000 | PEAK |
| 5 | | 2487.000 | 26.949 | 23.243 | 50.193 | -23.807 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 22.117 | 49.105 | -24.895 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/07 - 16:20** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11g_ ch11** |

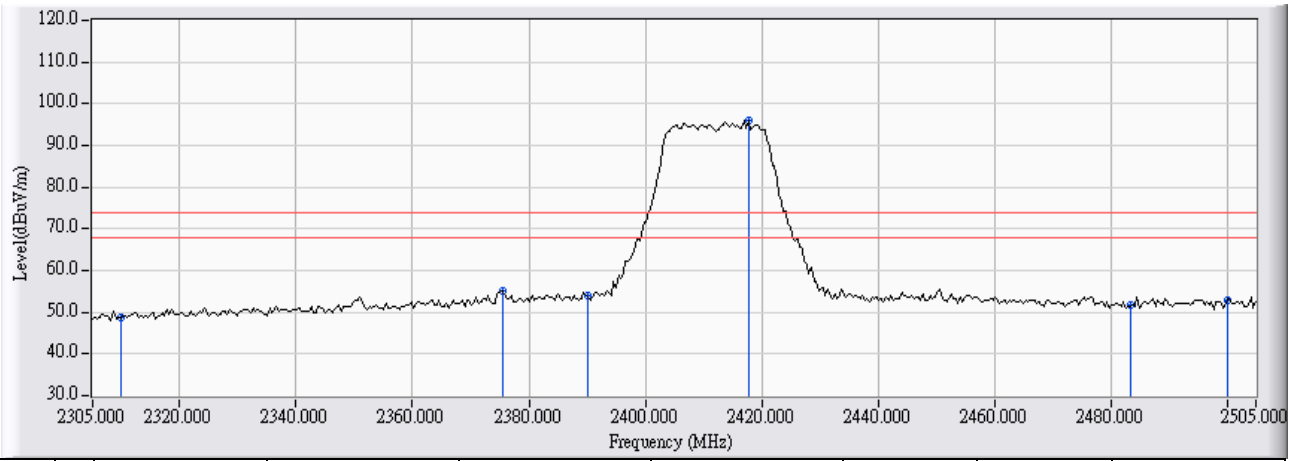



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.341 | 36.788 | -17.212 | 54.000 | AVERAGE |
| 2 | | 2390.000 | 26.674 | 10.509 | 37.183 | -16.817 | 54.000 | AVERAGE |
| 3 | * | 2466.600 | 26.892 | 47.031 | 73.923 | 19.923 | 54.000 | AVERAGE |
| 4 | | 2483.500 | 26.940 | 10.506 | 37.446 | -16.554 | 54.000 | AVERAGE |
| 5 | | 2500.000 | 26.989 | 10.320 | 37.308 | -16.692 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:50** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch1** |

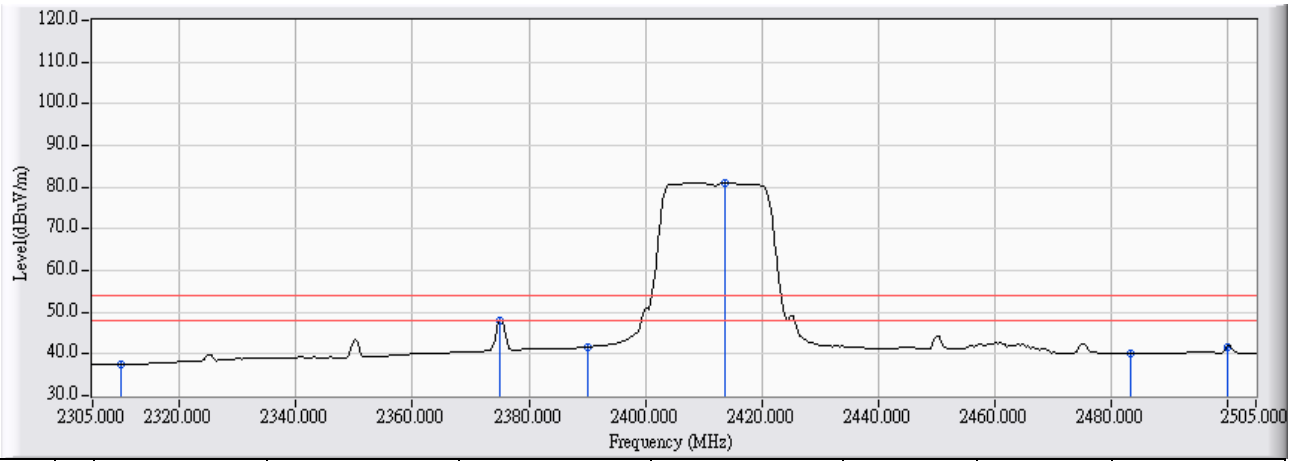



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.210 | 48.657 | -25.343 | 74.000 | PEAK |
| 2 | | 2375.400 | 26.633 | 28.393 | 55.026 | -18.974 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 27.201 | 53.875 | -20.125 | 74.000 | PEAK |
| 4 | * | 2417.800 | 26.753 | 69.182 | 95.935 | 21.935 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 24.675 | 51.615 | -22.385 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 25.764 | 52.752 | -21.248 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 18:26** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch1** |

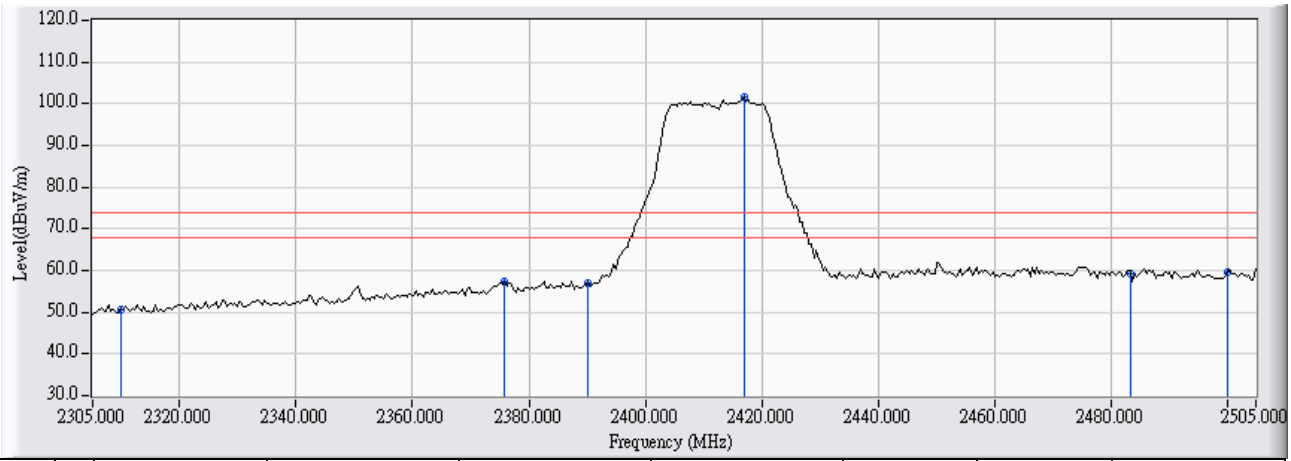



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 11.086 | 37.533 | -16.467 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 21.433 | 48.065 | -5.935 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 14.963 | 41.637 | -12.363 | 54.000 | AVERAGE |
| 4 | * | 2413.800 | 26.742 | 54.274 | 81.016 | 27.016 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 13.098 | 40.038 | -13.962 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 14.680 | 41.668 | -12.332 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 16:36** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch1** |

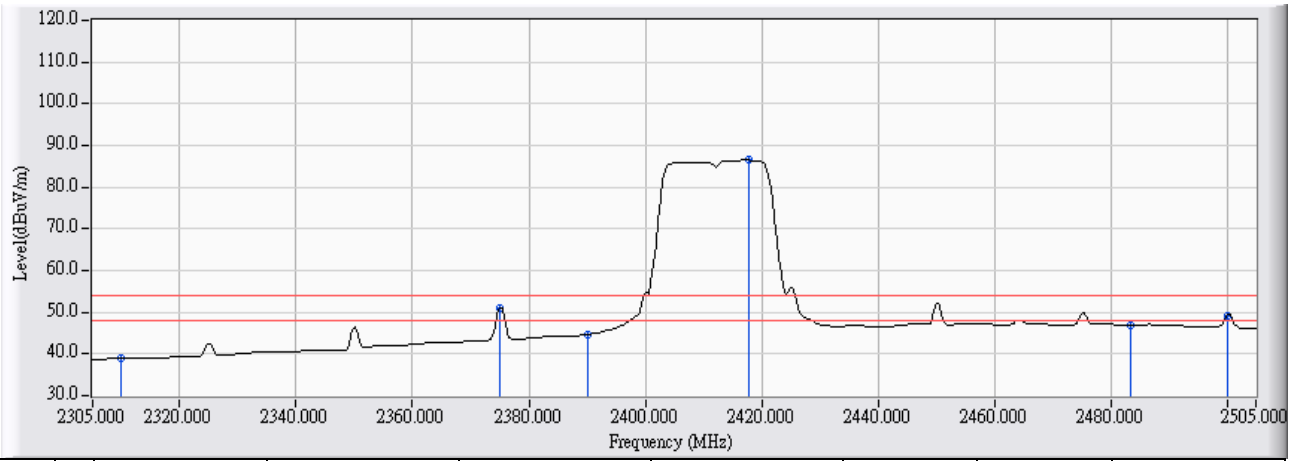



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 24.278 | 50.725 | -23.275 | 74.000 | PEAK |
| 2 | | 2375.800 | 26.635 | 30.812 | 57.446 | -16.554 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 30.293 | 56.967 | -17.033 | 74.000 | PEAK |
| 4 | * | 2417.000 | 26.751 | 74.931 | 101.682 | 27.682 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 32.405 | 59.345 | -14.655 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 32.466 | 59.454 | -14.546 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 16:33** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch1** |

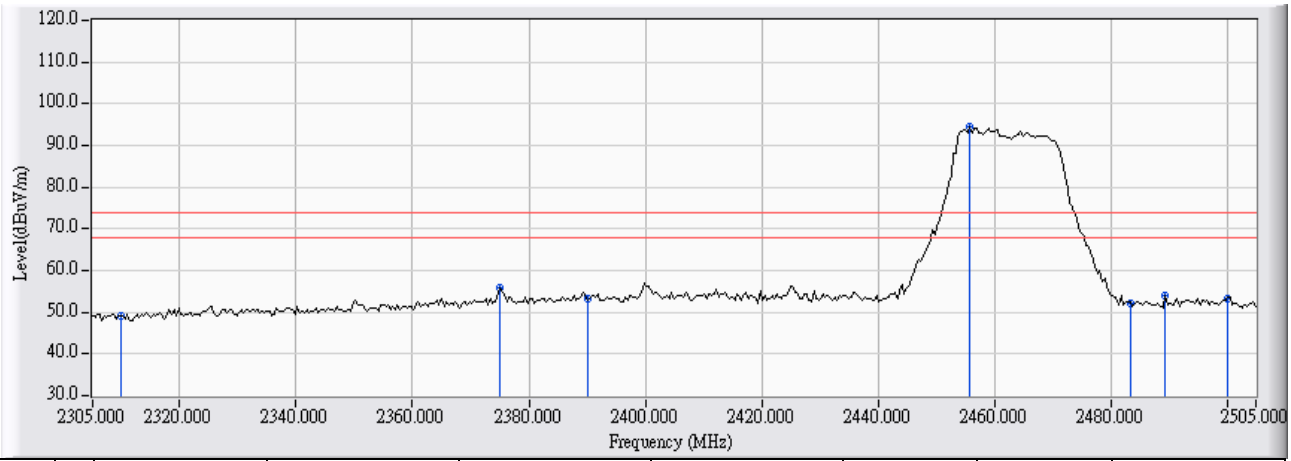



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 12.559 | 39.006 | -14.994 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 24.300 | 50.932 | -3.068 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 17.980 | 44.654 | -9.346 | 54.000 | AVERAGE |
| 4 | * | 2417.800 | 26.753 | 59.722 | 86.475 | 32.475 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 20.010 | 46.950 | -7.050 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 22.063 | 49.051 | -4.949 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:52** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch11** |

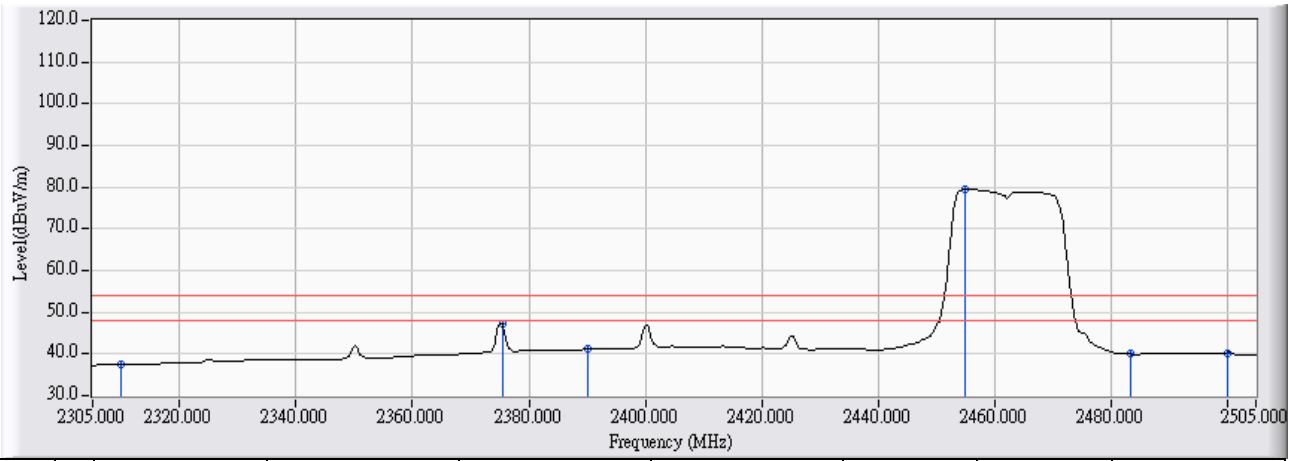



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.711 | 49.158 | -24.842 | 74.000 | PEAK |
| 2 | | 2375.000 | 26.632 | 29.063 | 55.695 | -18.305 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 26.451 | 53.125 | -20.875 | 74.000 | PEAK |
| 4 | * | 2455.800 | 26.862 | 67.588 | 94.449 | 20.449 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 25.277 | 52.217 | -21.783 | 74.000 | PEAK |
| 6 | | 2489.400 | 26.957 | 27.196 | 54.153 | -19.847 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 26.286 | 53.274 | -20.726 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:55** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch11** |

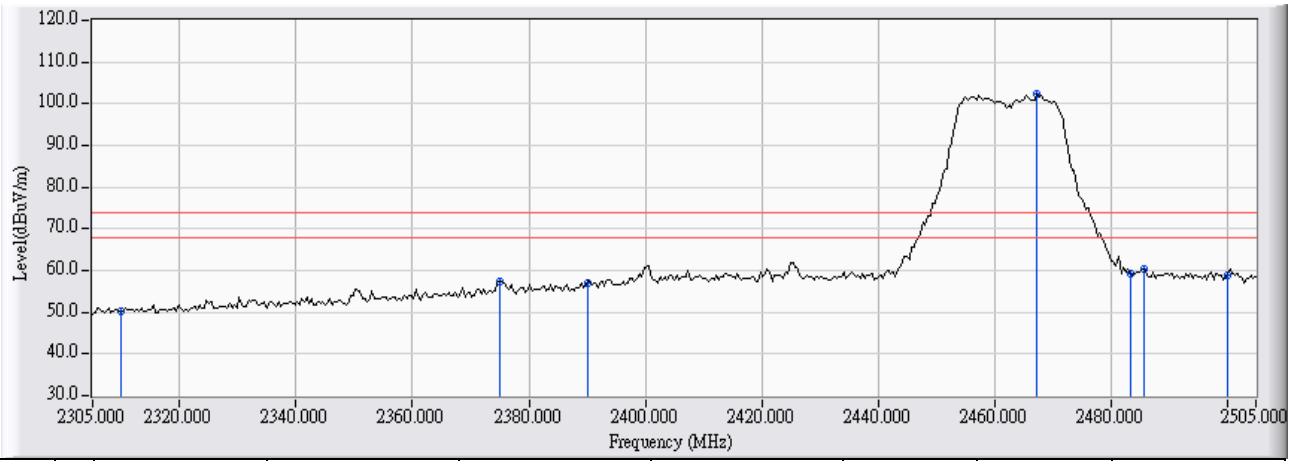



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 11.002 | 37.449 | -16.551 | 54.000 | AVERAGE |
| 2 | | 2375.400 | 26.633 | 20.459 | 47.092 | -6.908 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 14.488 | 41.162 | -12.838 | 54.000 | AVERAGE |
| 4 | * | 2455.000 | 26.859 | 52.729 | 79.588 | 25.588 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 13.003 | 39.943 | -14.057 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 13.251 | 40.239 | -13.761 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 16:40** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch11** |

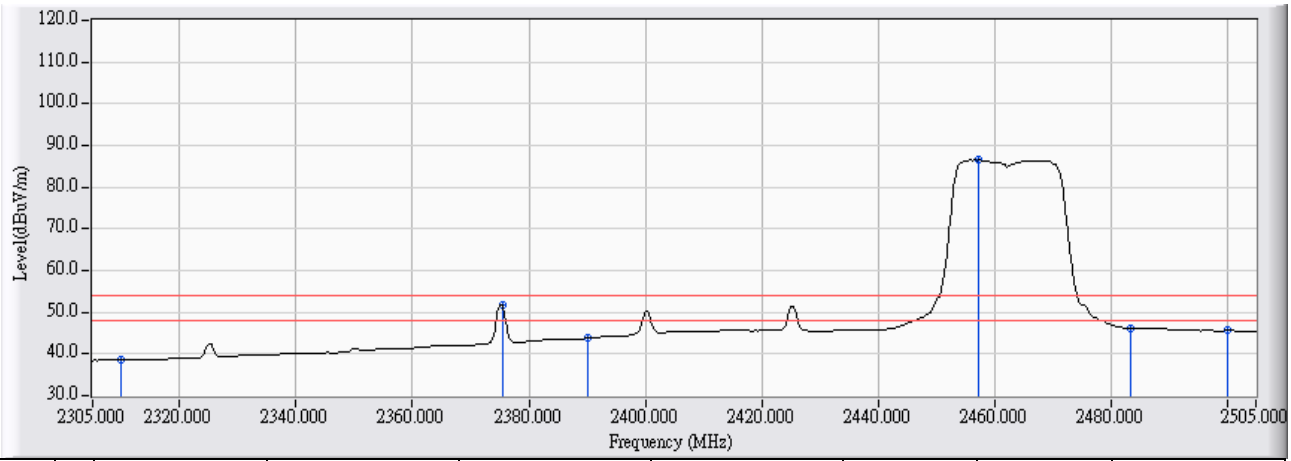



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 23.761 | 50.208 | -23.792 | 74.000 | PEAK |
| 2 | | 2375.000 | 26.632 | 30.838 | 57.470 | -16.530 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 30.425 | 57.099 | -16.901 | 74.000 | PEAK |
| 4 | * | 2467.400 | 26.895 | 75.380 | 102.274 | 28.274 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 32.258 | 59.198 | -14.802 | 74.000 | PEAK |
| 6 | | 2485.800 | 26.947 | 33.490 | 60.436 | -13.564 | 74.000 | PEAK |
| 7 | | 2500.000 | 26.989 | 31.837 | 58.825 | -15.175 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 16:46** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n20M_ ch11** |

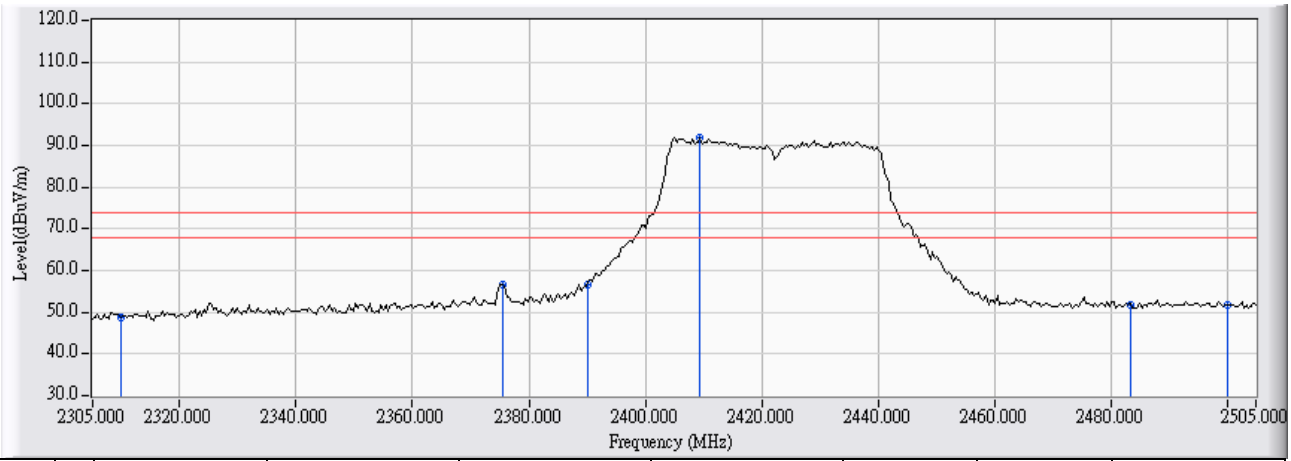



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 12.226 | 38.673 | -15.327 | 54.000 | AVERAGE |
| 2 | | 2375.400 | 26.633 | 25.023 | 51.656 | -2.344 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 17.058 | 43.732 | -10.268 | 54.000 | AVERAGE |
| 4 | * | 2457.400 | 26.866 | 59.590 | 86.456 | 32.456 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 19.220 | 46.160 | -7.840 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 18.768 | 45.756 | -8.244 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:24** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch11** |

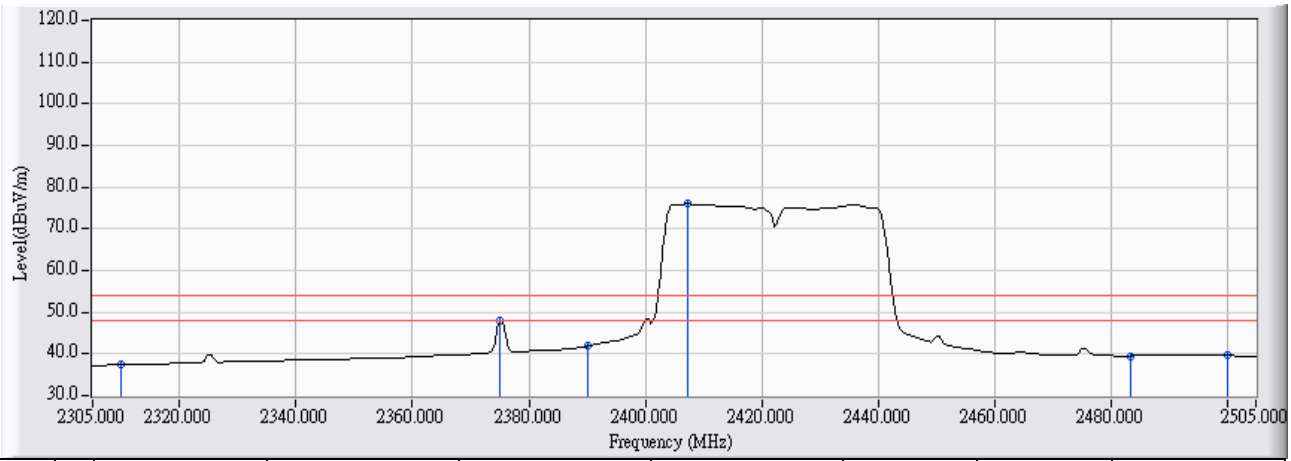



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.475 | 48.922 | -25.078 | 74.000 | PEAK |
| 2 | | 2375.400 | 26.633 | 30.172 | 56.805 | -17.195 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 30.056 | 56.730 | -17.270 | 74.000 | PEAK |
| 4 | * | 2409.400 | 26.729 | 65.046 | 91.776 | 17.776 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 24.910 | 51.850 | -22.150 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 24.787 | 51.775 | -22.225 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:22** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch3** |

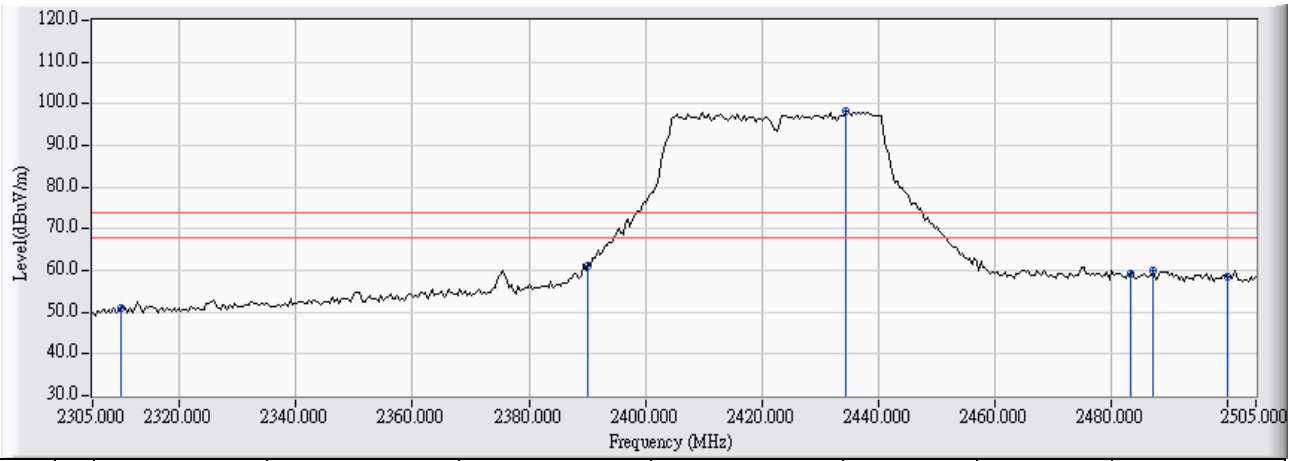



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.899 | 37.346 | -16.654 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 21.307 | 47.939 | -6.061 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 15.177 | 41.851 | -12.149 | 54.000 | AVERAGE |
| 4 | * | 2407.400 | 26.724 | 49.250 | 75.974 | 21.974 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 12.604 | 39.544 | -14.456 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 12.735 | 39.723 | -14.277 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:10** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch3** |

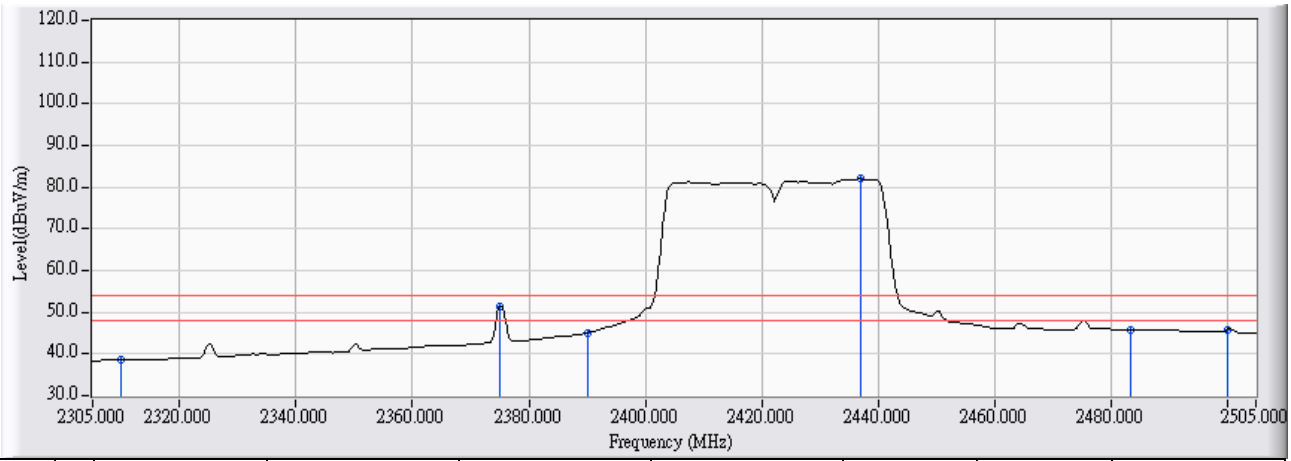



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 24.485 | 50.932 | -23.068 | 74.000 | PEAK |
| 2 | | 2390.000 | 26.674 | 34.301 | 60.975 | -13.025 | 74.000 | PEAK |
| 3 | * | 2434.600 | 26.801 | 71.544 | 98.345 | 24.345 | 74.000 | PEAK |
| 4 | | 2483.500 | 26.940 | 32.155 | 59.095 | -14.905 | 74.000 | PEAK |
| 5 | | 2487.400 | 26.951 | 33.159 | 60.110 | -13.890 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 31.519 | 58.507 | -15.493 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:13** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch3** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 12.227 | 38.674 | -15.326 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 24.812 | 51.444 | -2.556 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 18.378 | 45.052 | -8.948 | 54.000 | AVERAGE |
| 4 | * | 2437.000 | 26.808 | 55.143 | 81.951 | 27.951 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 18.855 | 45.795 | -8.205 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 18.762 | 45.750 | -8.250 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

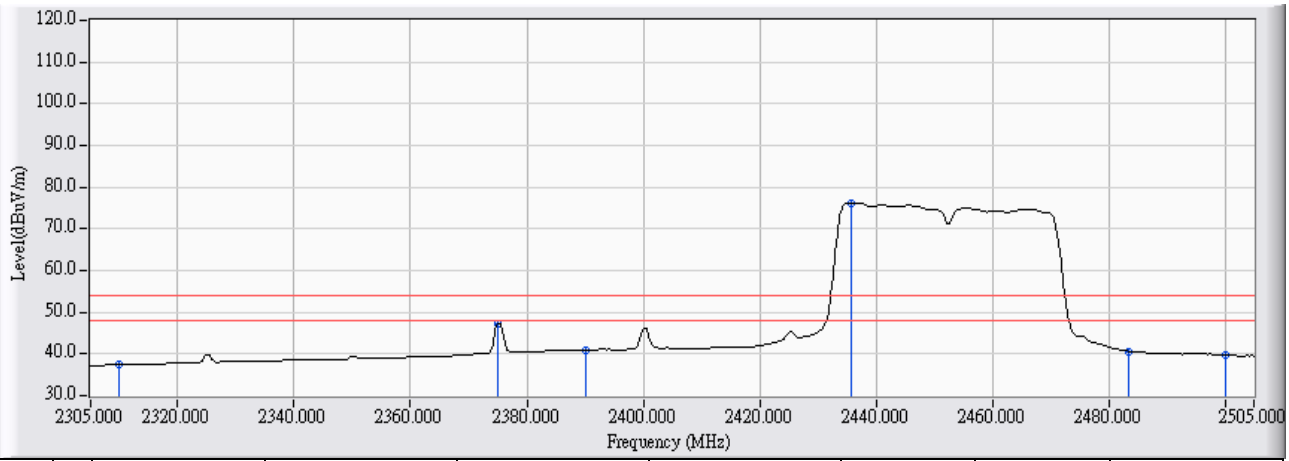
| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:31** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch9** |


| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 22.681 | 49.128 | -24.872 | 74.000 | PEAK |
| 2 | | 2375.000 | 26.632 | 29.468 | 56.100 | -17.900 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 26.427 | 53.101 | -20.899 | 74.000 | PEAK |
| 4 | * | 2435.800 | 26.805 | 65.460 | 92.265 | 18.265 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 29.301 | 56.241 | -17.759 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 24.749 | 51.737 | -22.263 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:34** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch9** |

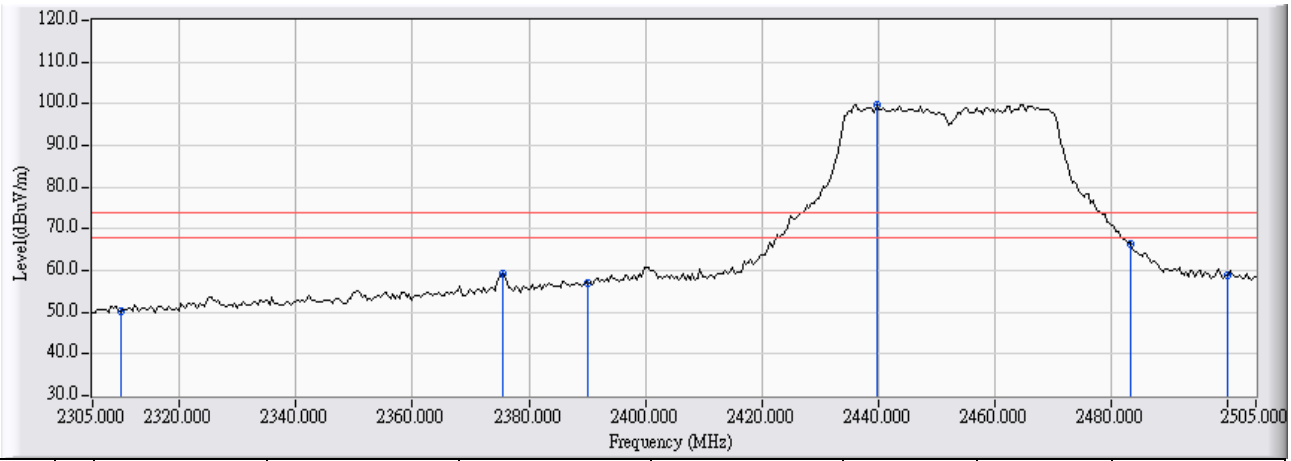



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 10.917 | 37.364 | -16.636 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 20.736 | 47.368 | -6.632 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 14.236 | 40.910 | -13.090 | 54.000 | AVERAGE |
| 4 | * | 2435.800 | 26.805 | 49.488 | 76.293 | 22.293 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 13.695 | 40.635 | -13.365 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 12.859 | 39.847 | -14.153 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 17:07** |
| **Limit : FCC_SpartC_15.247_H_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch9** |

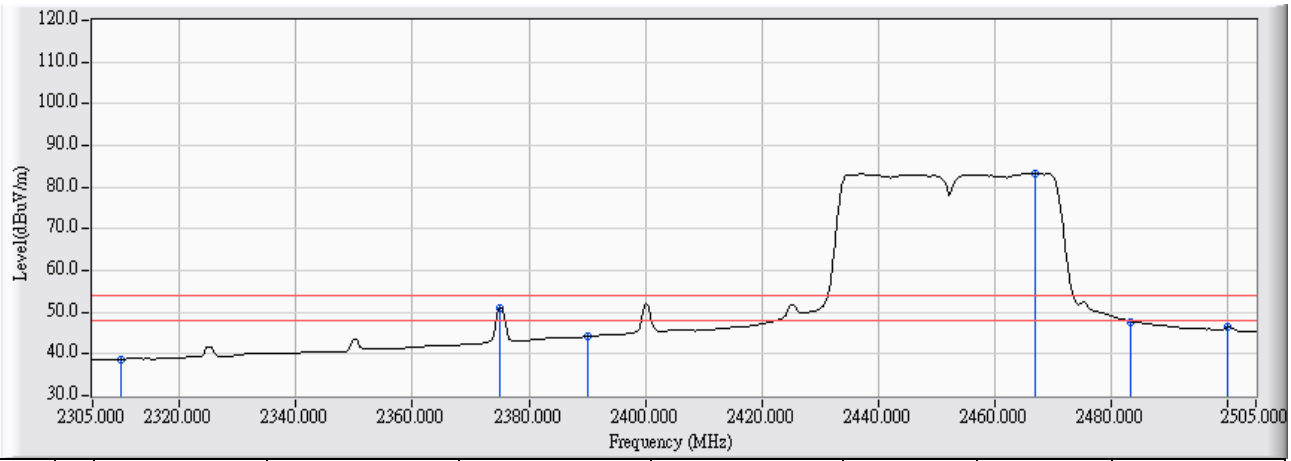



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 23.869 | 50.316 | -23.684 | 74.000 | PEAK |
| 2 | | 2375.400 | 26.633 | 32.693 | 59.326 | -14.674 | 74.000 | PEAK |
| 3 | | 2390.000 | 26.674 | 30.331 | 57.005 | -16.995 | 74.000 | PEAK |
| 4 | * | 2439.800 | 26.815 | 72.869 | 99.685 | 25.685 | 74.000 | PEAK |
| 5 | | 2483.500 | 26.940 | 39.501 | 66.441 | -7.559 | 74.000 | PEAK |
| 6 | | 2500.000 | 26.989 | 31.876 | 58.864 | -15.136 | 74.000 | PEAK |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

| | |
|---|---|
| **Site : CB1** | **Time : 2014/08/04 - 16:58** |
| **Limit : FCC_SpartC_15.247_H_03M_AV** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power :** |
| **EUT : Wireless Ceiling Access Point** | **Note : Mode 1: Transmit_802.11n40M_ ch9** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2310.000 | 26.447 | 12.297 | 38.744 | -15.256 | 54.000 | AVERAGE |
| 2 | | 2375.000 | 26.632 | 24.256 | 50.888 | -3.112 | 54.000 | AVERAGE |
| 3 | | 2390.000 | 26.674 | 17.479 | 44.153 | -9.847 | 54.000 | AVERAGE |
| 4 | * | 2467.000 | 26.893 | 56.466 | 83.359 | 29.359 | 54.000 | AVERAGE |
| 5 | | 2483.500 | 26.940 | 20.864 | 47.804 | -6.196 | 54.000 | AVERAGE |
| 6 | | 2500.000 | 26.989 | 19.385 | 46.373 | -7.627 | 54.000 | AVERAGE |

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

# 7. Occupied Bandwidth

## 7.1. Test Equipment

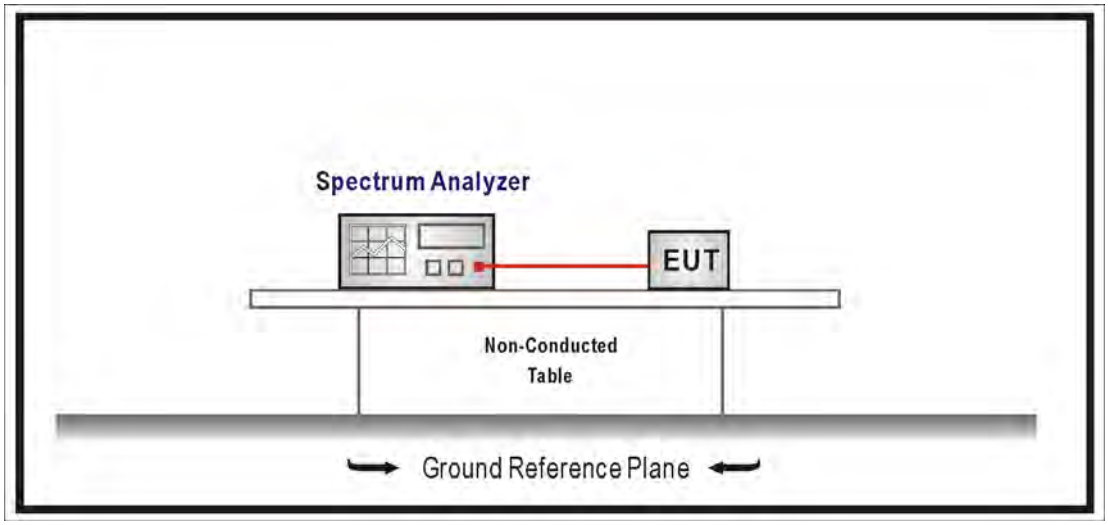
The following test equipments are used during the test:

**Occupied Bandwidth / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9010A-EXA | US47140172 | 2014/08/05 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 7.2. Test Setup




## 7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure section 8.1 of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100KHz, VBW≧3xRBW, Sweep time=Auto, Set Peak detector.

## 7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

## 7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

## 7.6. Uncertainty

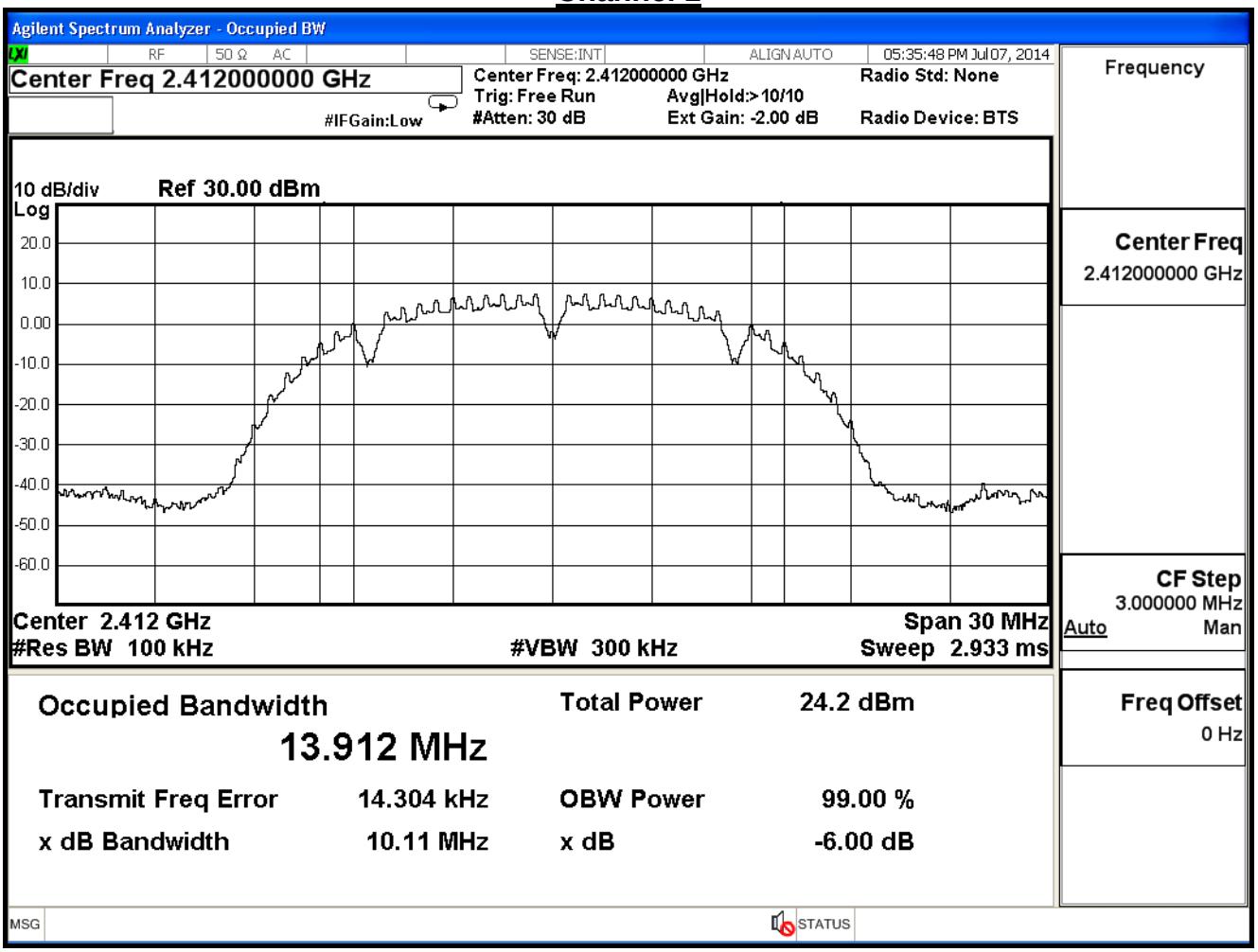
The measurement uncertainty is defined as ±150Hz

## 7.7. Test Result

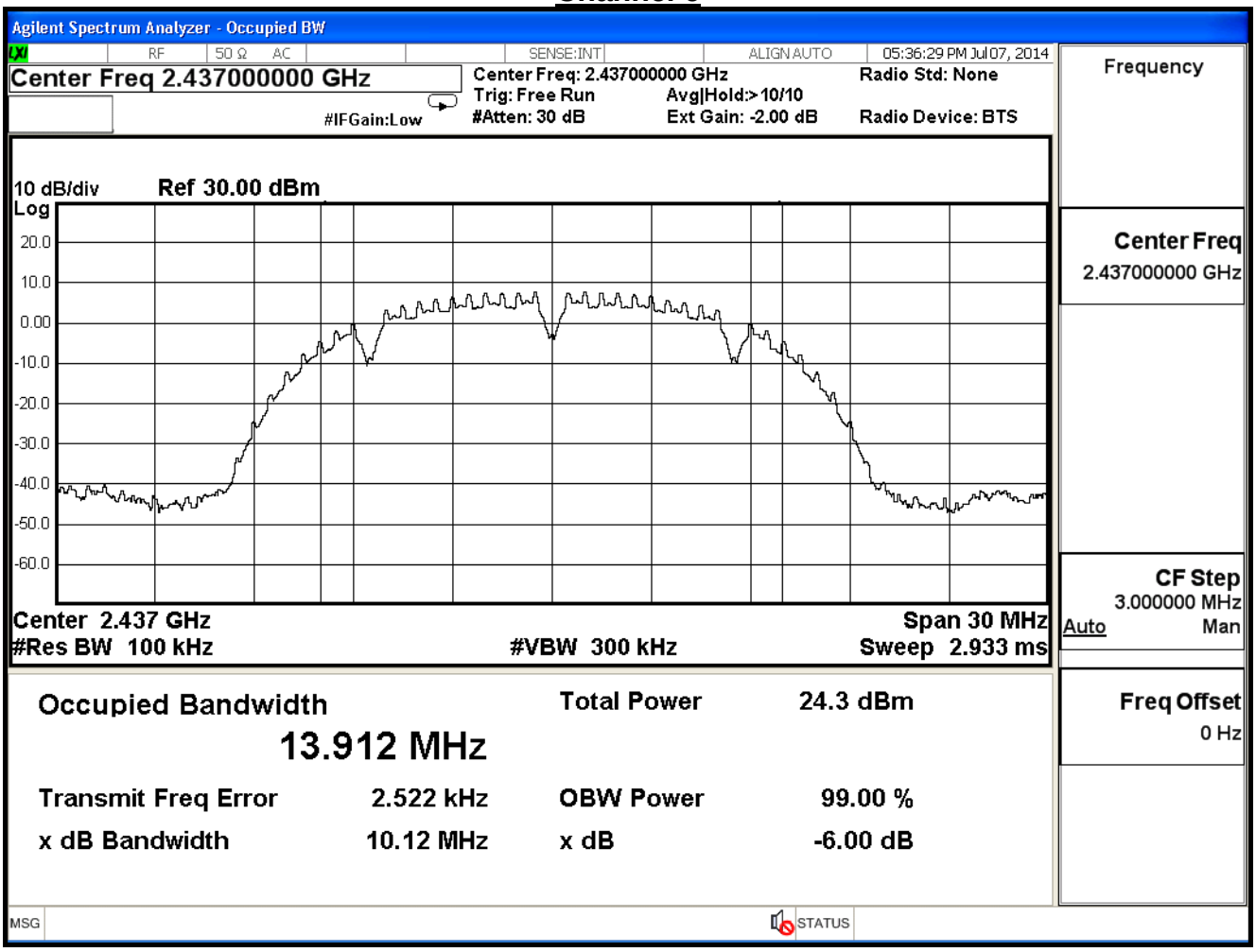
| Product | Wireless Ceiling Access Point | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| 802.11 b | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 1 | 2412 | 10.11 | ≧0.5 | Pass |
| 6 | 2437 | 10.12 | ≧0.5 | Pass |
| 11 | 2462 | 10.12 | ≧0.5 | Pass |

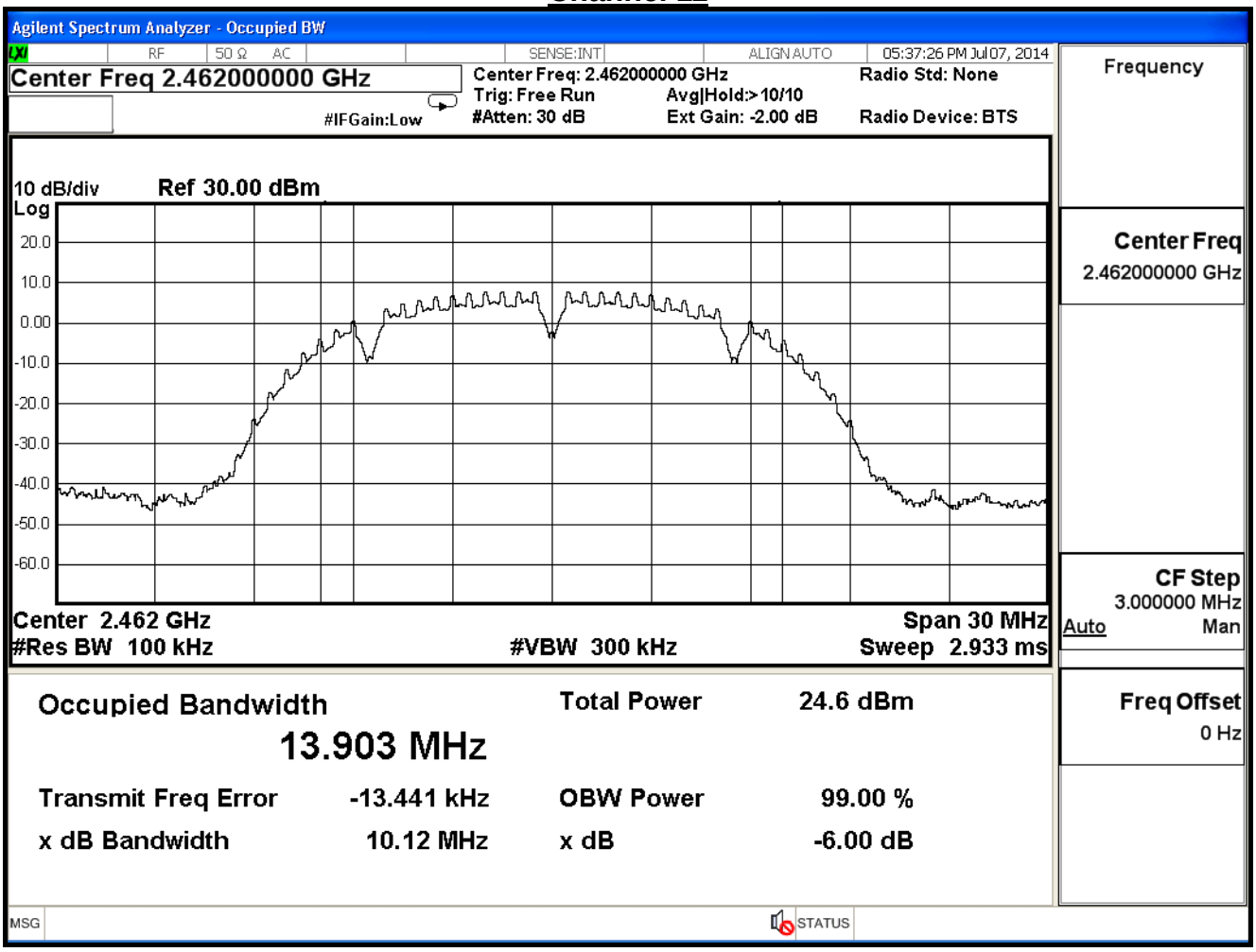
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:36:29 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
CF Step
3.000000 MHz
Auto
Man
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
13.912 MHz
Total Power
24.3 dBm
Transmit Freq Error
2.522 kHz
OBW Power
99.00 %
x dB Bandwidth
10.12 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

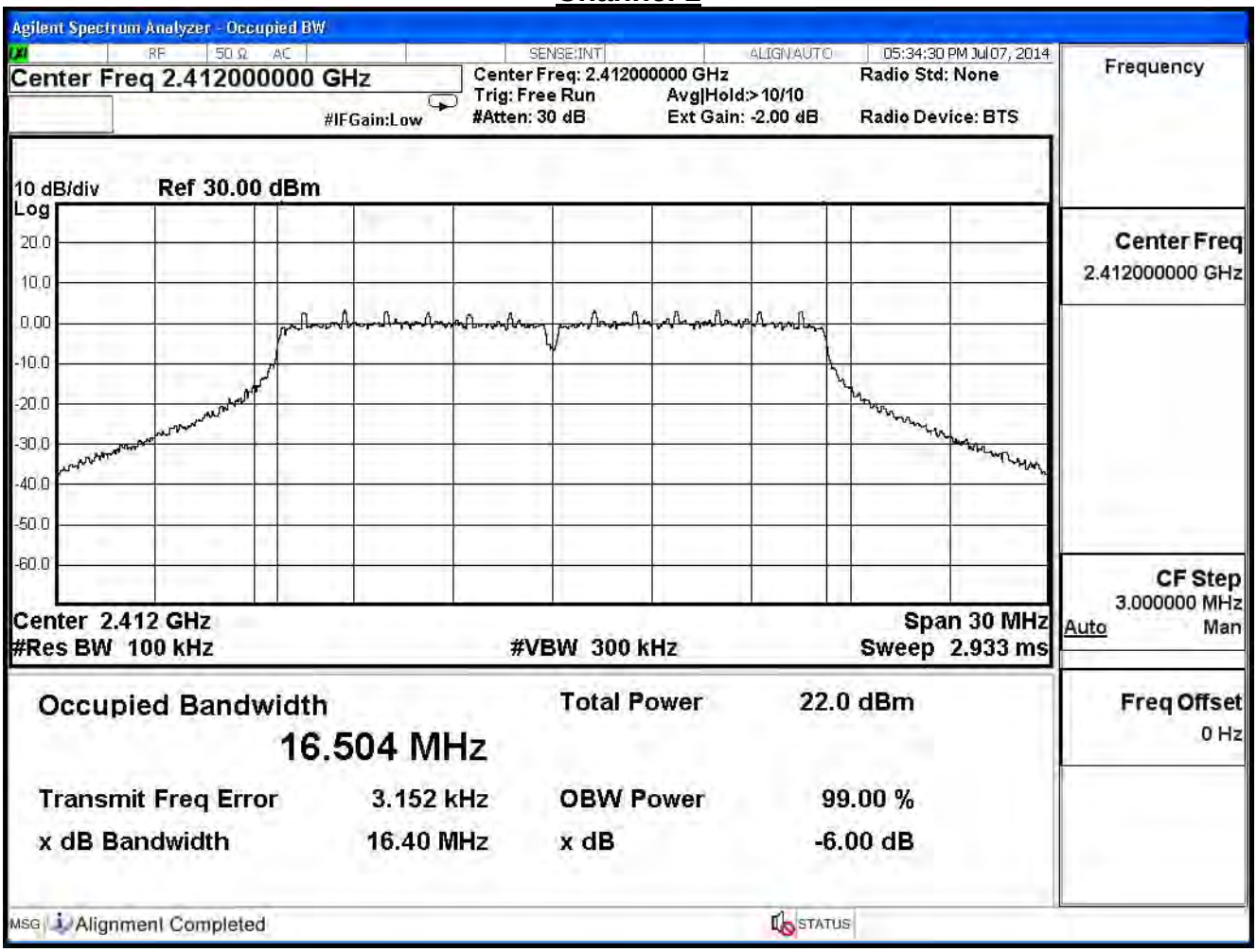
## Channel 11


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:37:26 PM Jul 07, 2014
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
CF Step
3.000000 MHz
Auto
Man
Occupied Bandwidth
13.903 MHz
Total Power
24.6 dBm
Transmit Freq Error
-13.441 kHz
OBW Power
99.00 %
x dB Bandwidth
10.12 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

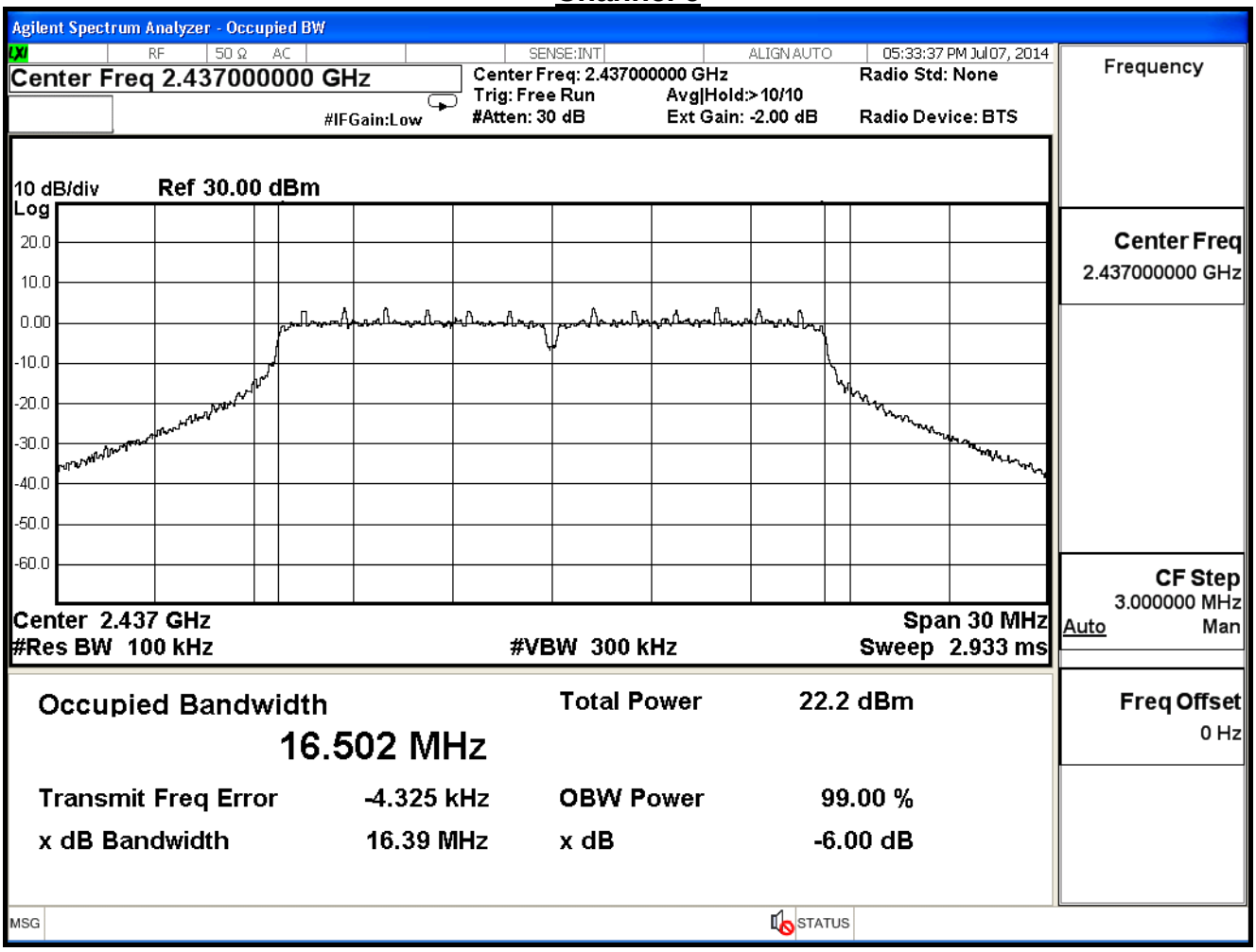
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11g | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 1 | 2412 | 16.40 | ≧0.5 | Pass |
| 6 | 2437 | 16.39 | ≧0.5 | Pass |
| 11 | 2462 | 16.39 | ≧0.5 | Pass |

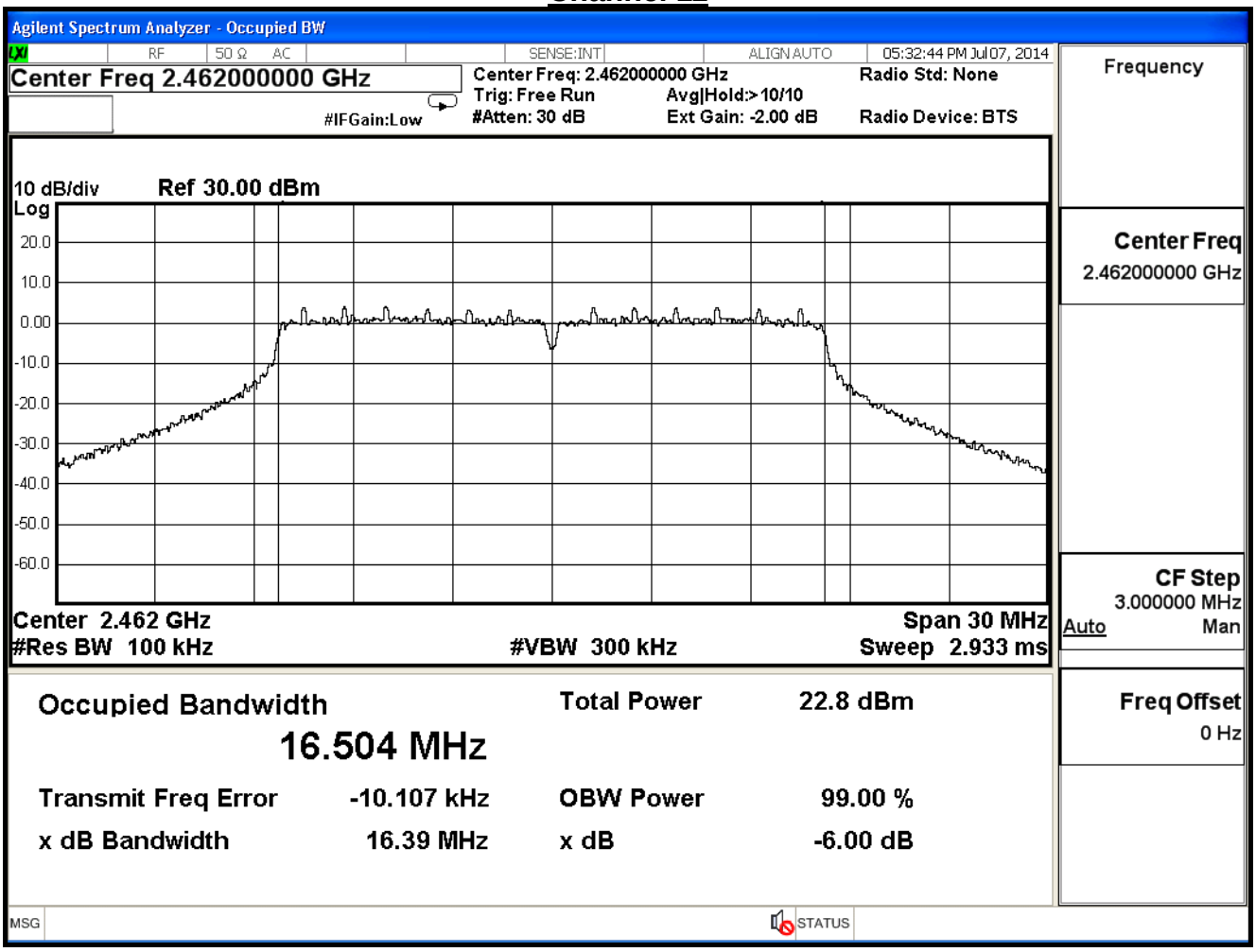
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:33:37 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
CF Step
3.000000 MHz
Auto
Man
Occupied Bandwidth
16.502 MHz
Total Power
22.2 dBm
Transmit Freq Error
-4.325 kHz
OBW Power
99.00 %
x dB Bandwidth
16.39 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

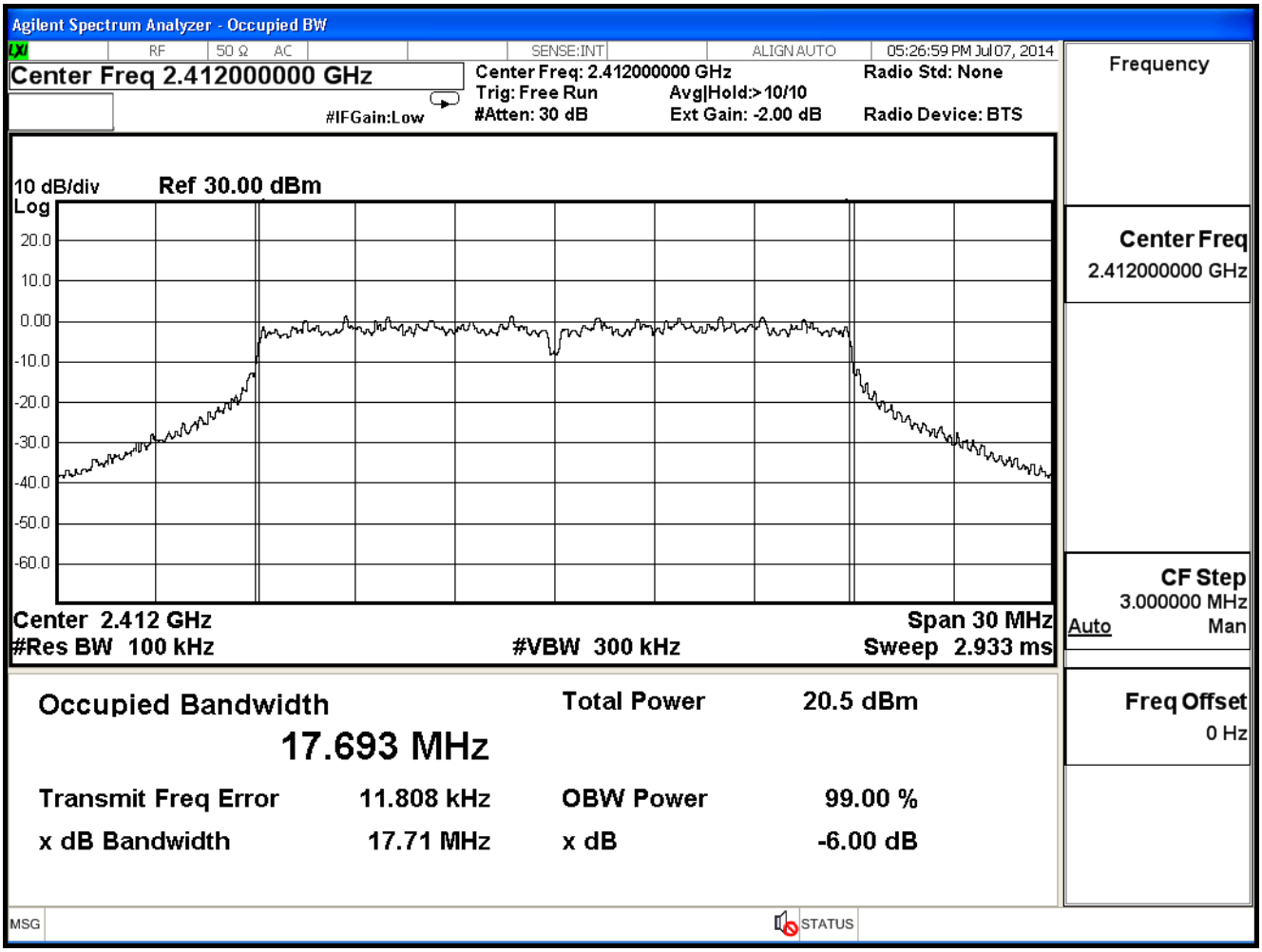
## Channel 11


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:32:44 PM Jul 07, 2014
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.462000000 GHz
CF Step
3.000000 MHz
Auto
Man
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
16.504 MHz
Total Power
22.8 dBm
Transmit Freq Error
-10.107 kHz
OBW Power
99.00 %
x dB Bandwidth
16.39 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

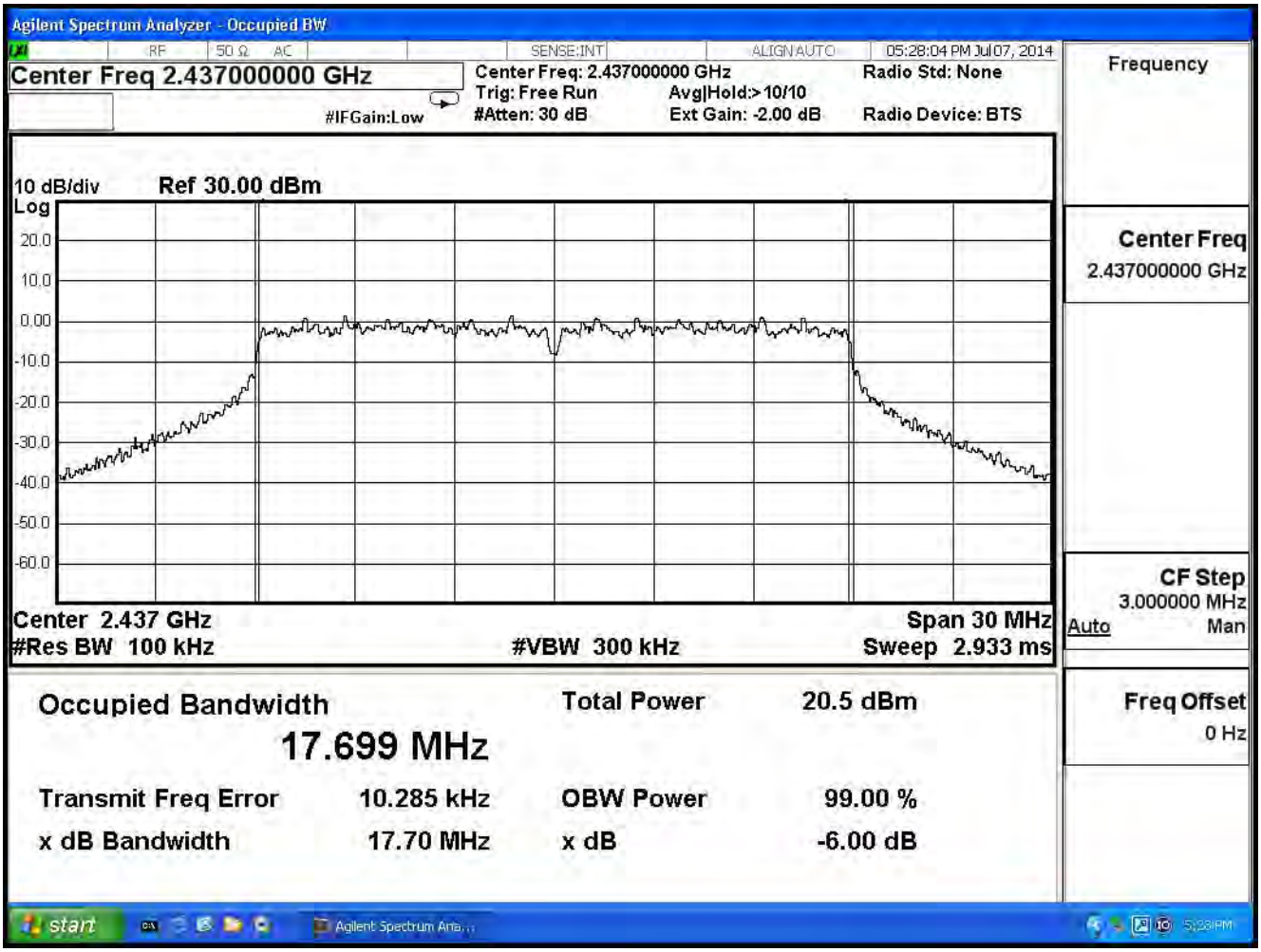
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11n (20MHz), ANT 0 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 1 | 2412 | 17.71 | ≧0.5 | Pass |
| 6 | 2437 | 17.70 | ≧0.5 | Pass |
| 11 | 2462 | 17.72 | ≧0.5 | Pass |

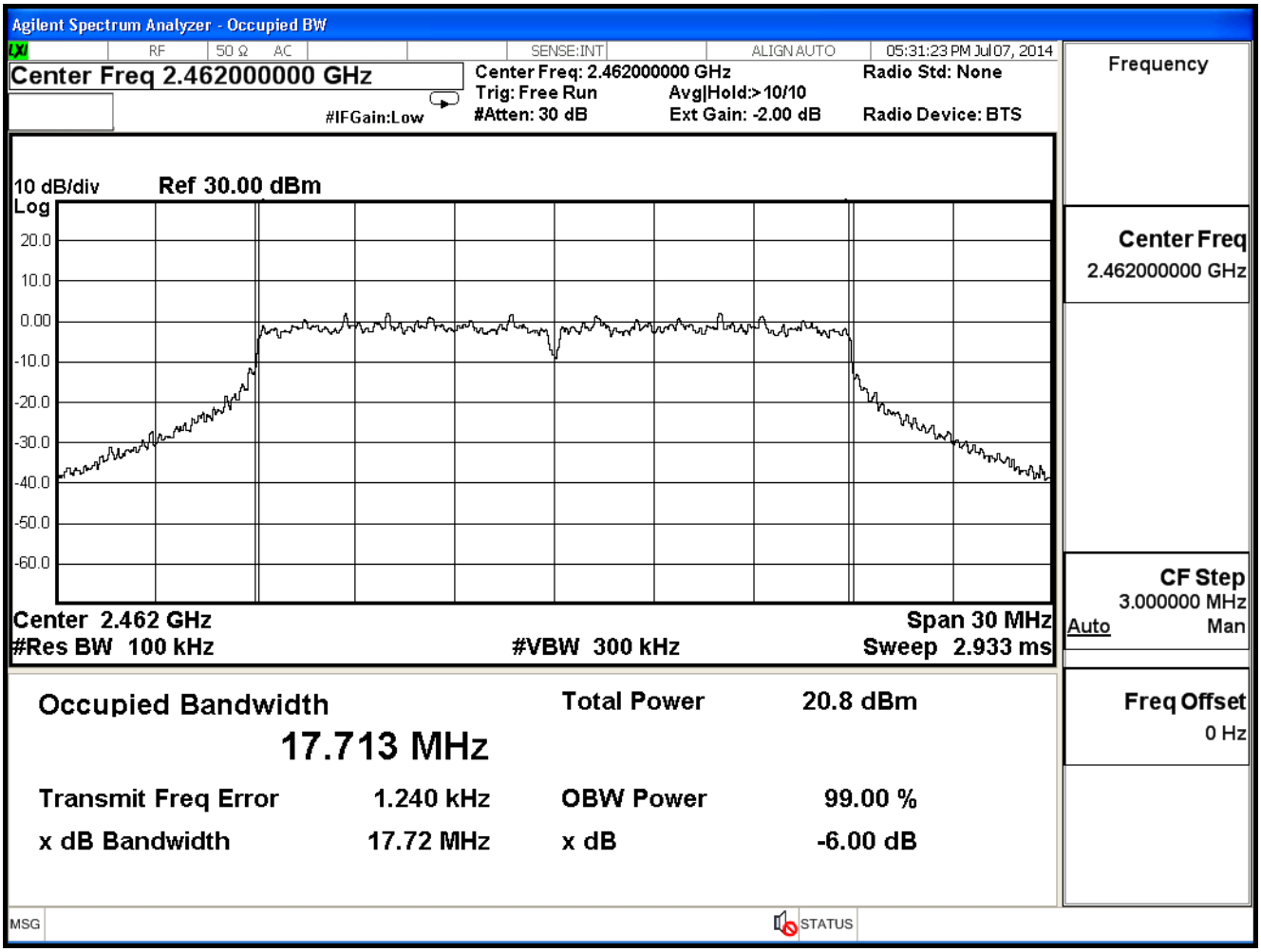
## Channel 1



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:28:04 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Ref 30.00 dBm
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
CF Step
3.000000 MHz
Auto
Man
Occupied Bandwidth
17.699 MHz
Total Power
20.5 dBm
Freq Offset
0 Hz
Transmit Freq Error
10.285 kHz
OBW Power
99.00 %
x dB Bandwidth
17.70 MHz
x dB
-6.00 dB
start
Agilent Spectrum Ana...

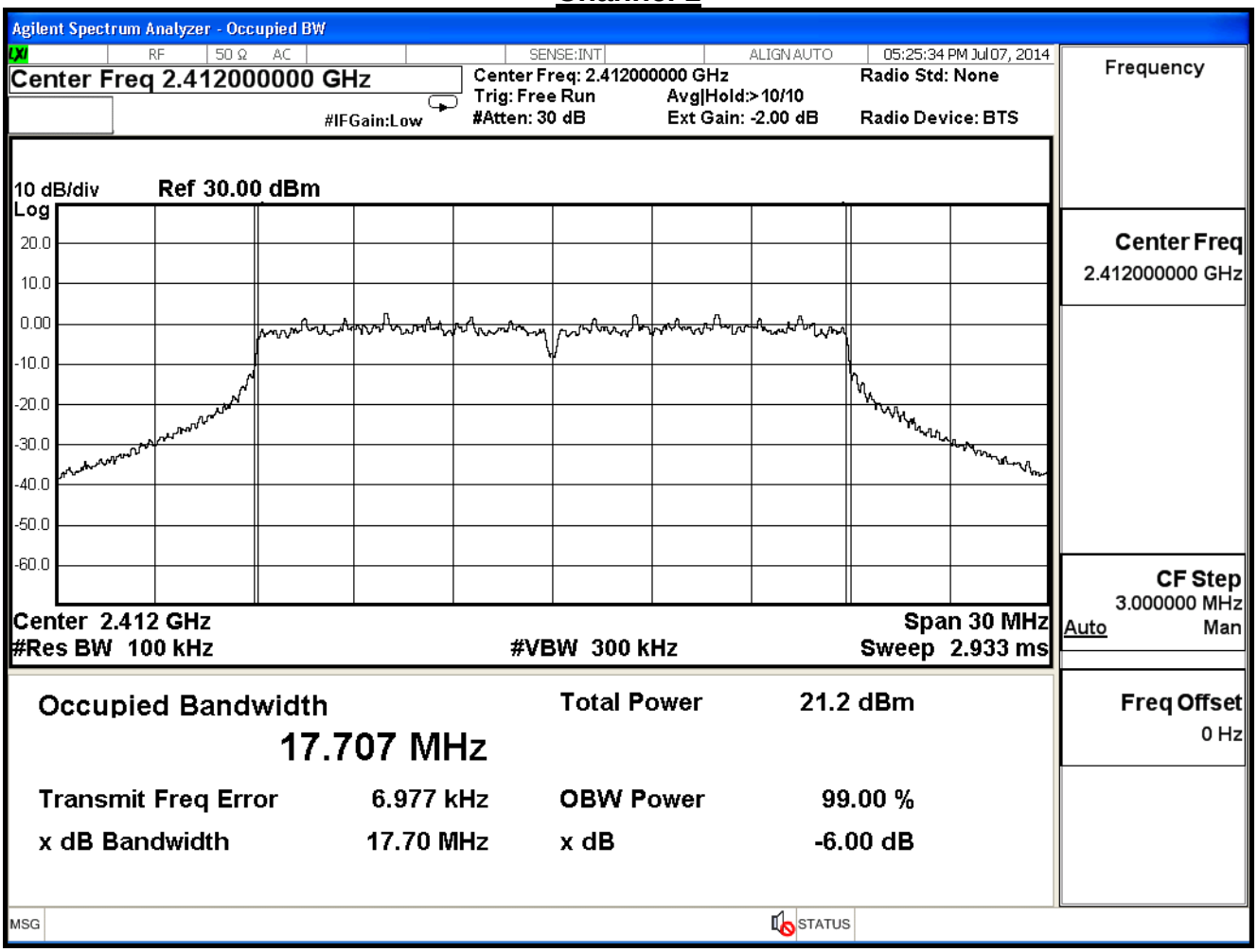
## Channel 11


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:31:23 PM Jul 07, 2014
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.462000000 GHz
CF Step
3.000000 MHz
Auto
Man
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
17.713 MHz
Total Power 20.8 dBm
Transmit Freq Error 1.240 kHz
OBW Power 99.00 %
x dB Bandwidth 17.72 MHz
x dB -6.00 dB
Freq Offset
0 Hz
MSG
STATUS

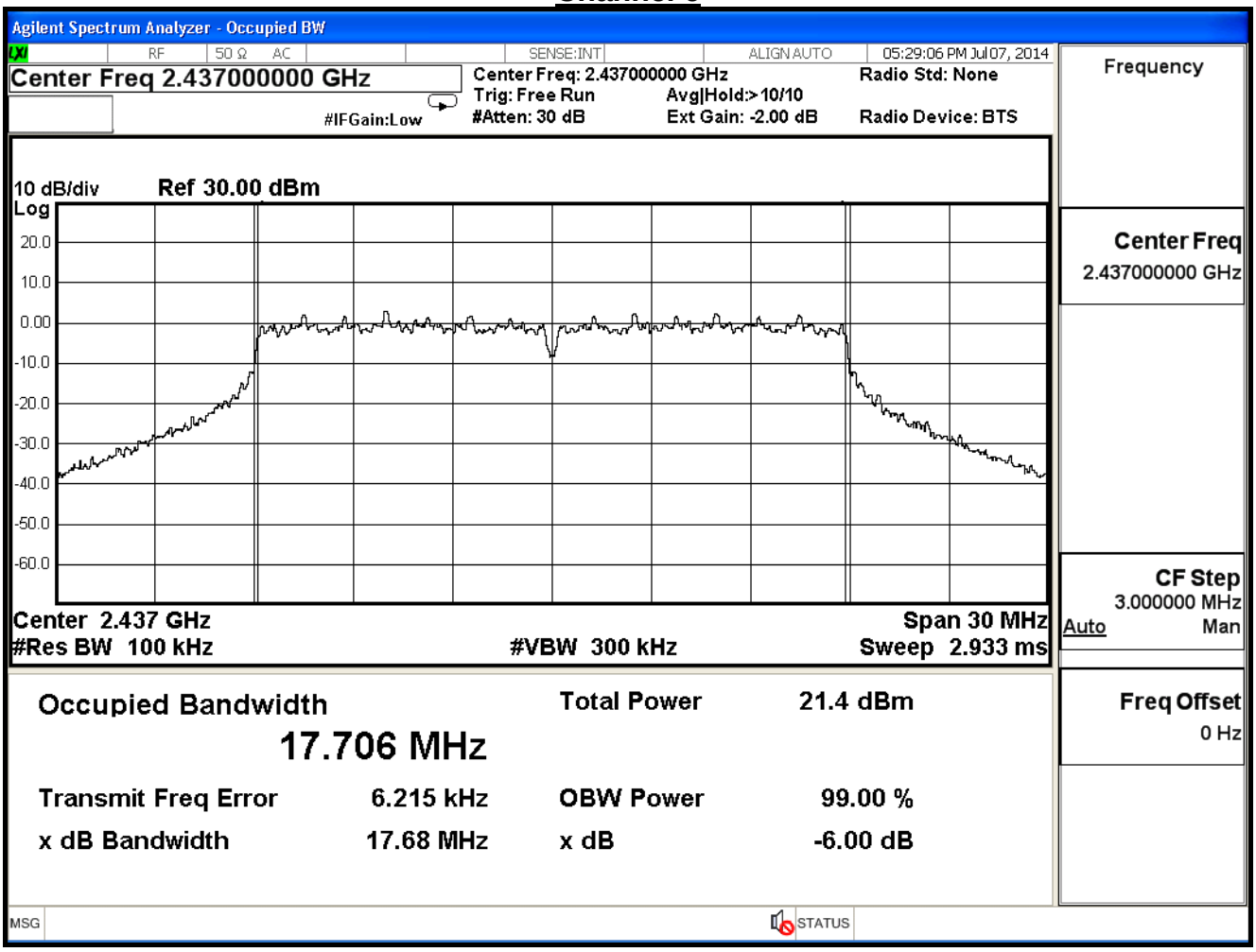
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (20MHz), ANT 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 1 | 2412 | 17.70 | ≧0.5 | Pass |
| 6 | 2437 | 17.68 | ≧0.5 | Pass |
| 11 | 2462 | 17.65 | ≧0.5 | Pass |

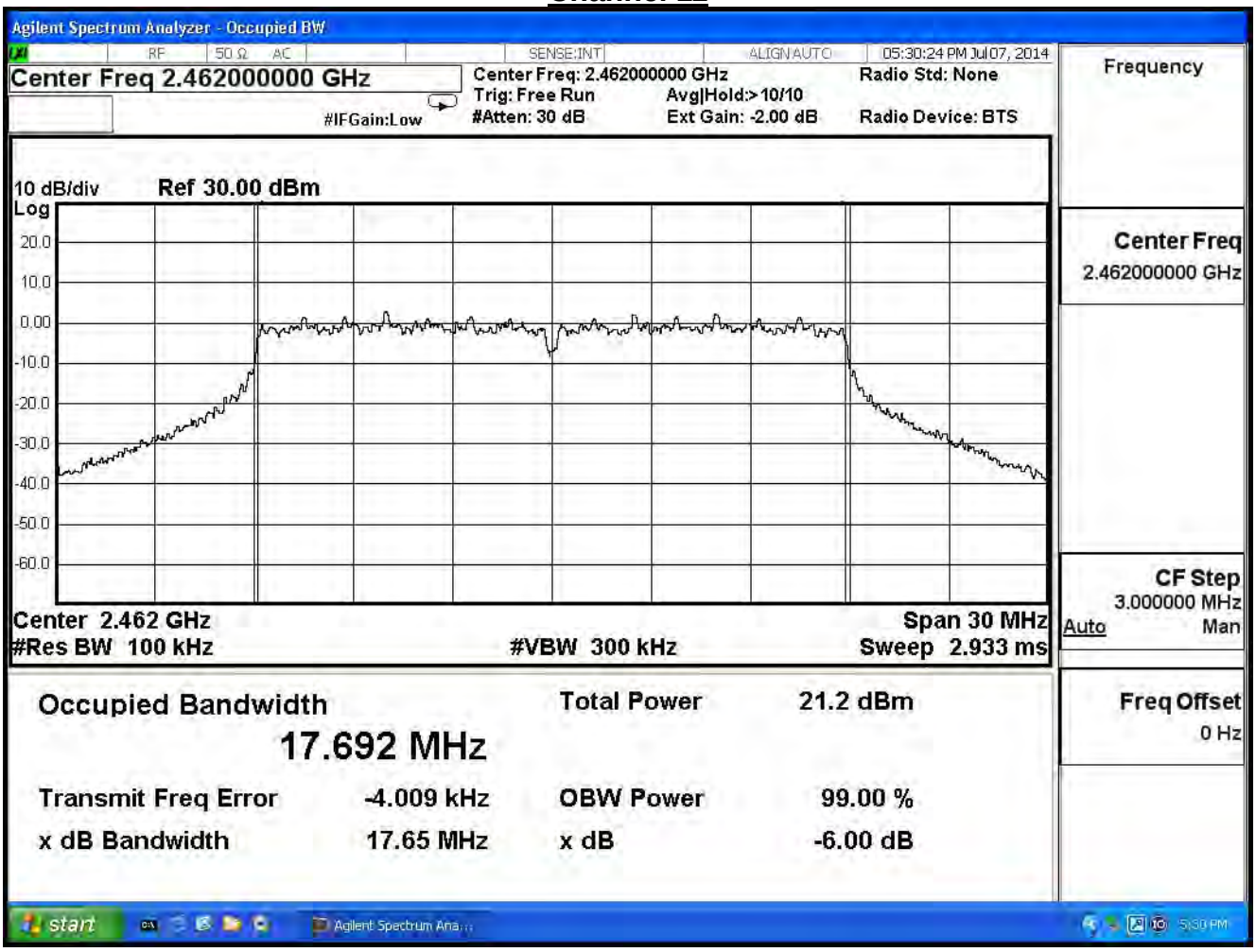
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:29:06 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
CF Step
3.000000 MHz
Auto
Man
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
17.706 MHz
Total Power
21.4 dBm
Transmit Freq Error
6.215 kHz
OBW Power
99.00 %
x dB Bandwidth
17.68 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

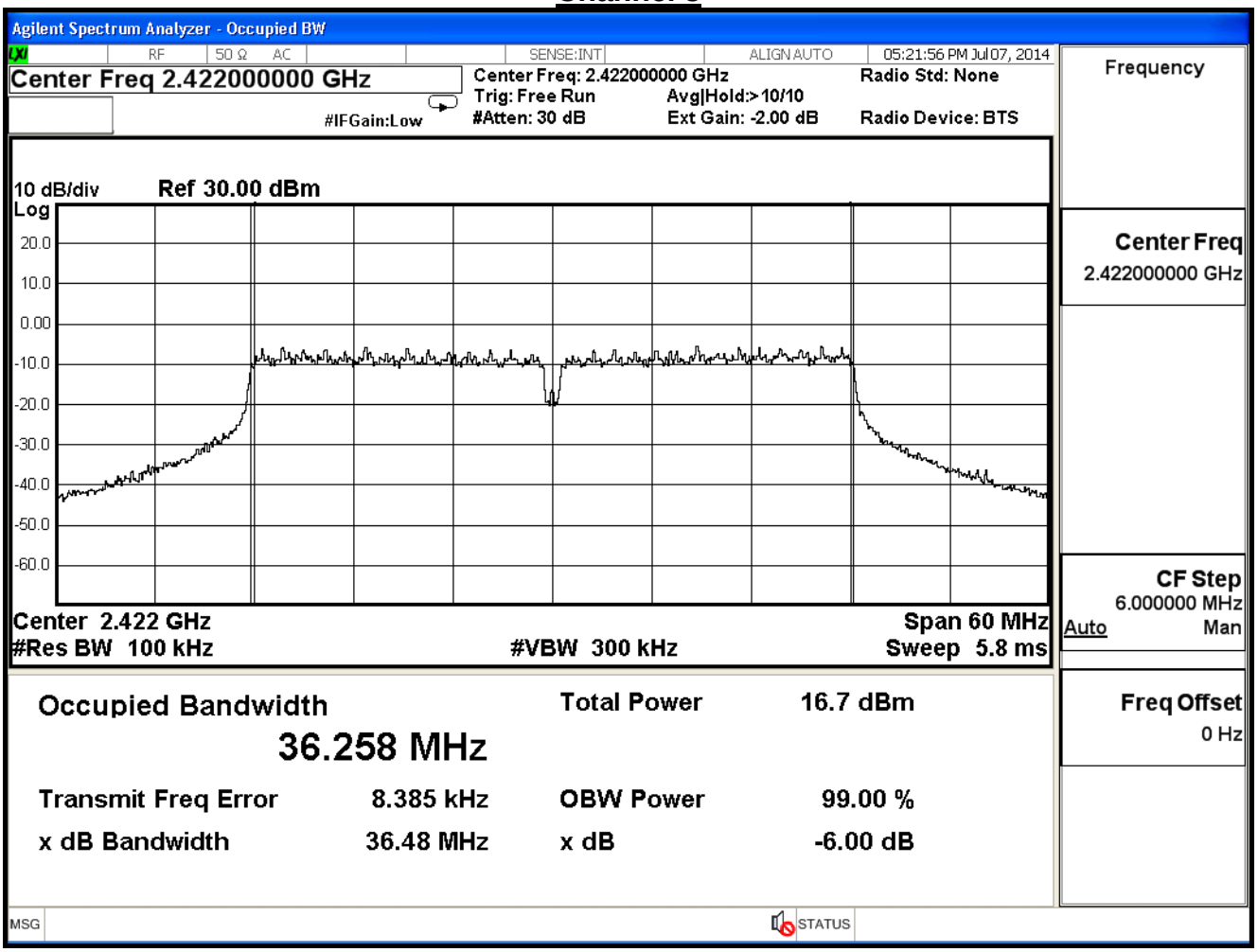
## Channel 11


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:30:24 PM Jul 07, 2014
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Ref 30.00 dBm
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.462000000 GHz
CF Step
3.000000 MHz
Auto
Man
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
17.692 MHz
Total Power
21.2 dBm
Freq Offset
0 Hz
Transmit Freq Error
-4.009 kHz
OBW Power
99.00 %
x dB Bandwidth
17.65 MHz
x dB
-6.00 dB
start
Agilent Spectrum Ana...
5:30 PM

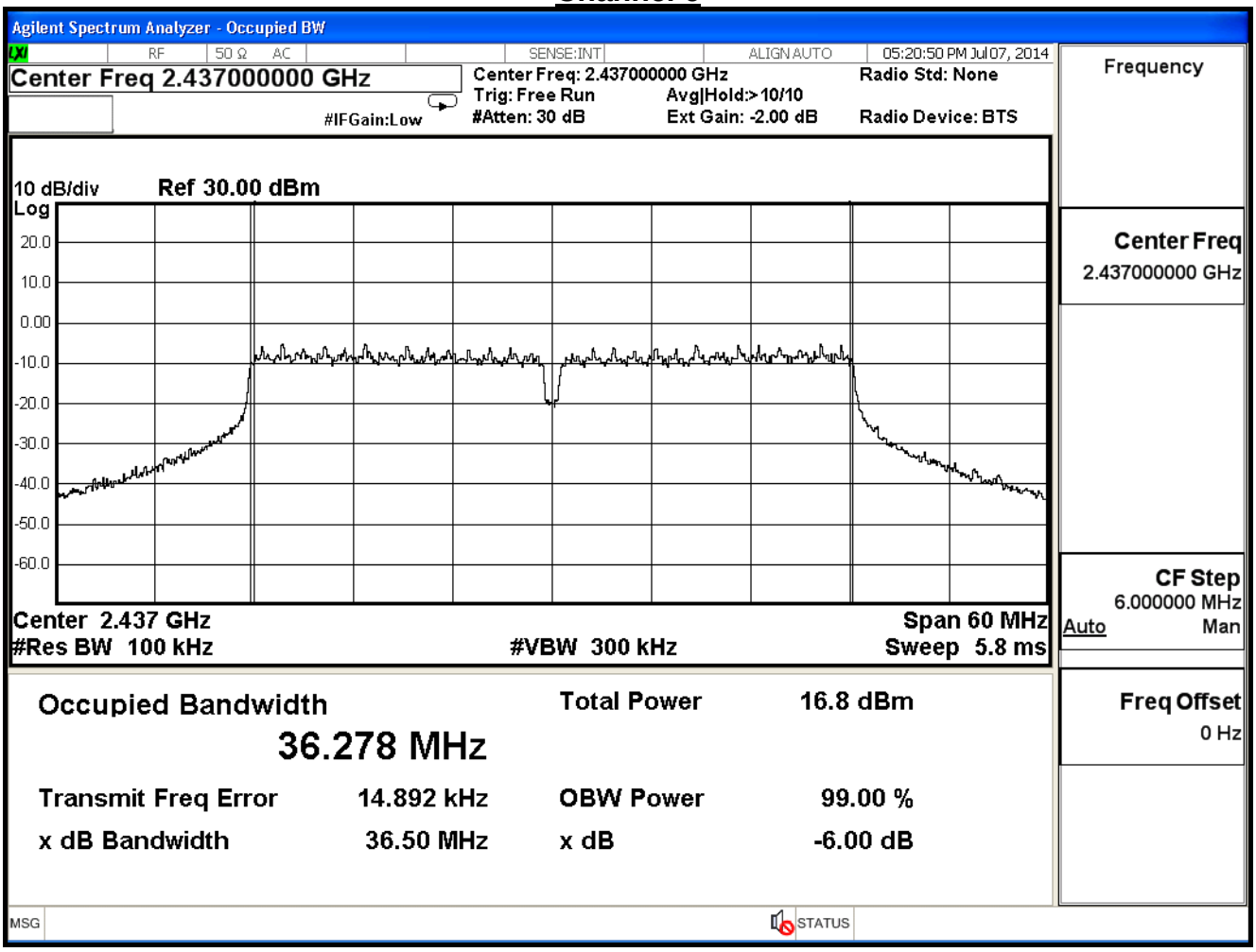
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (40MHz), ANT 0 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 3 | 2422 | 36.48 | ≧0.5 | Pass |
| 6 | 2437 | 36.50 | ≧0.5 | Pass |
| 9 | 2452 | 36.47 | ≧0.5 | Pass |

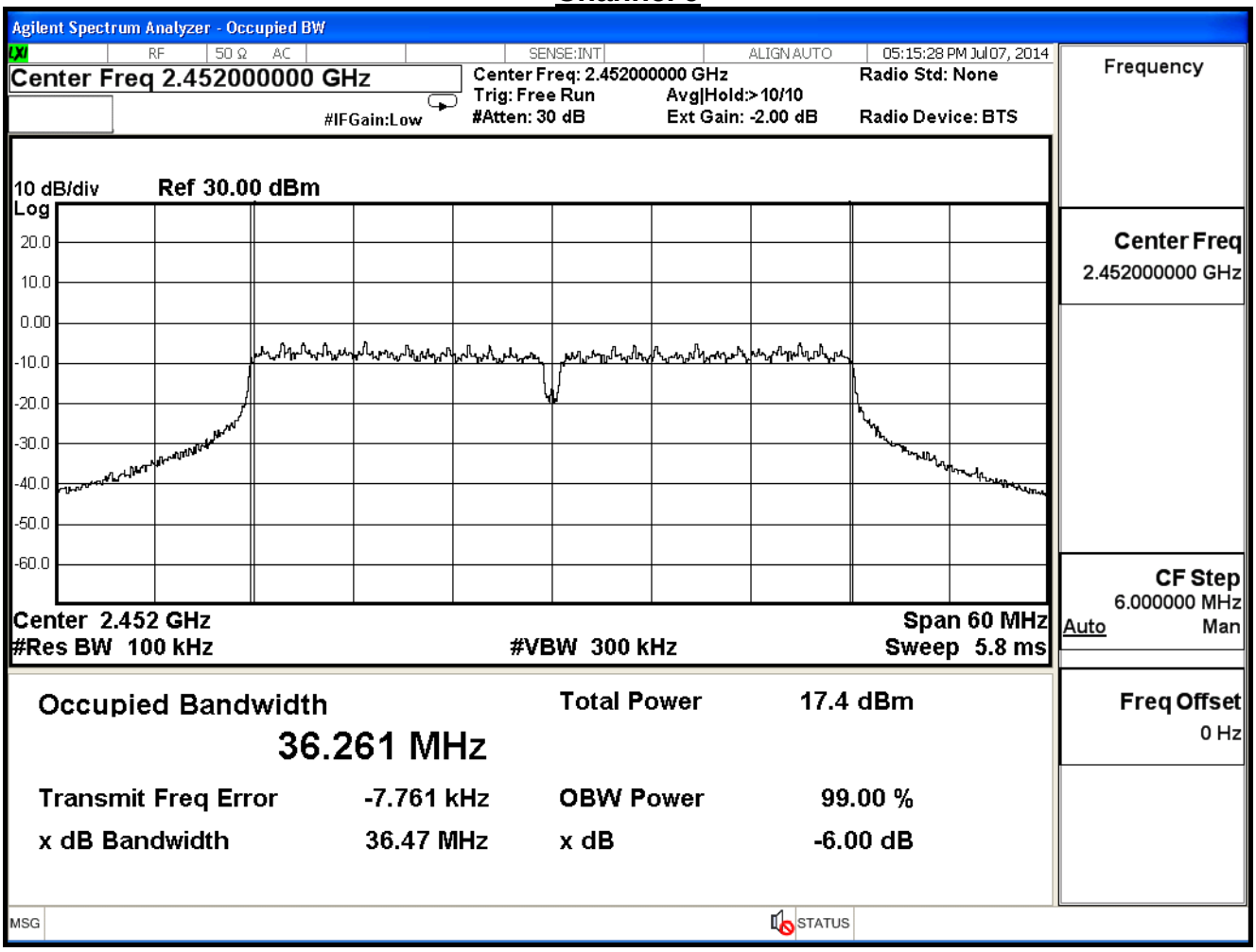
**Channel 3**



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:20:50 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -2.00 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
CF Step
6.000000 MHz
Auto
Man
Occupied Bandwidth
36.278 MHz
Total Power
16.8 dBm
Transmit Freq Error
14.892 kHz
OBW Power
99.00 %
x dB Bandwidth
36.50 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

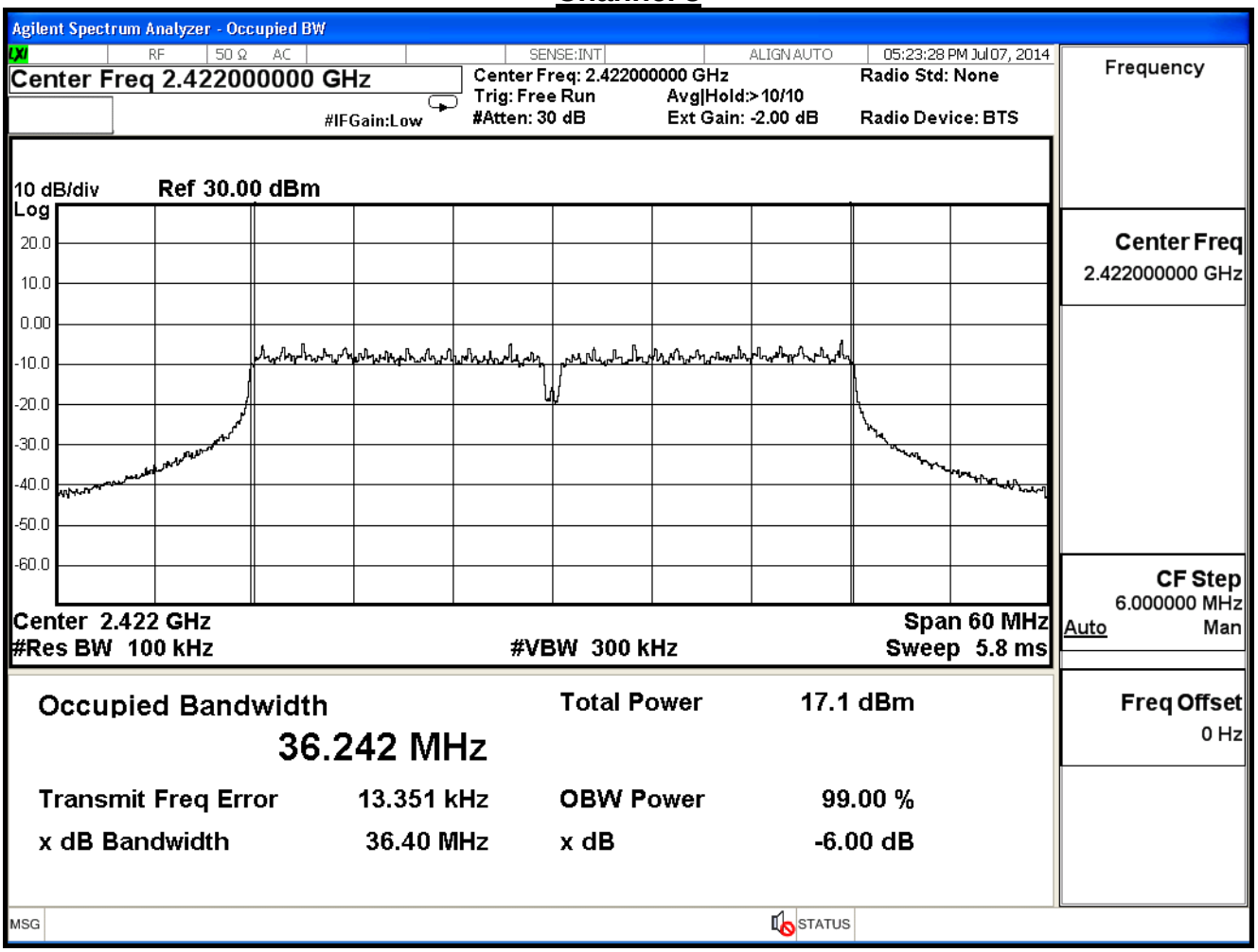
## Channel 9


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:15:28 PM Jul 07, 2014
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -2.00 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.452000000 GHz
Center 2.452 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
CF Step
6.000000 MHz
Auto
Man
Occupied Bandwidth
36.261 MHz
Total Power
17.4 dBm
Transmit Freq Error
-7.761 kHz
OBW Power
99.00 %
x dB Bandwidth
36.47 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

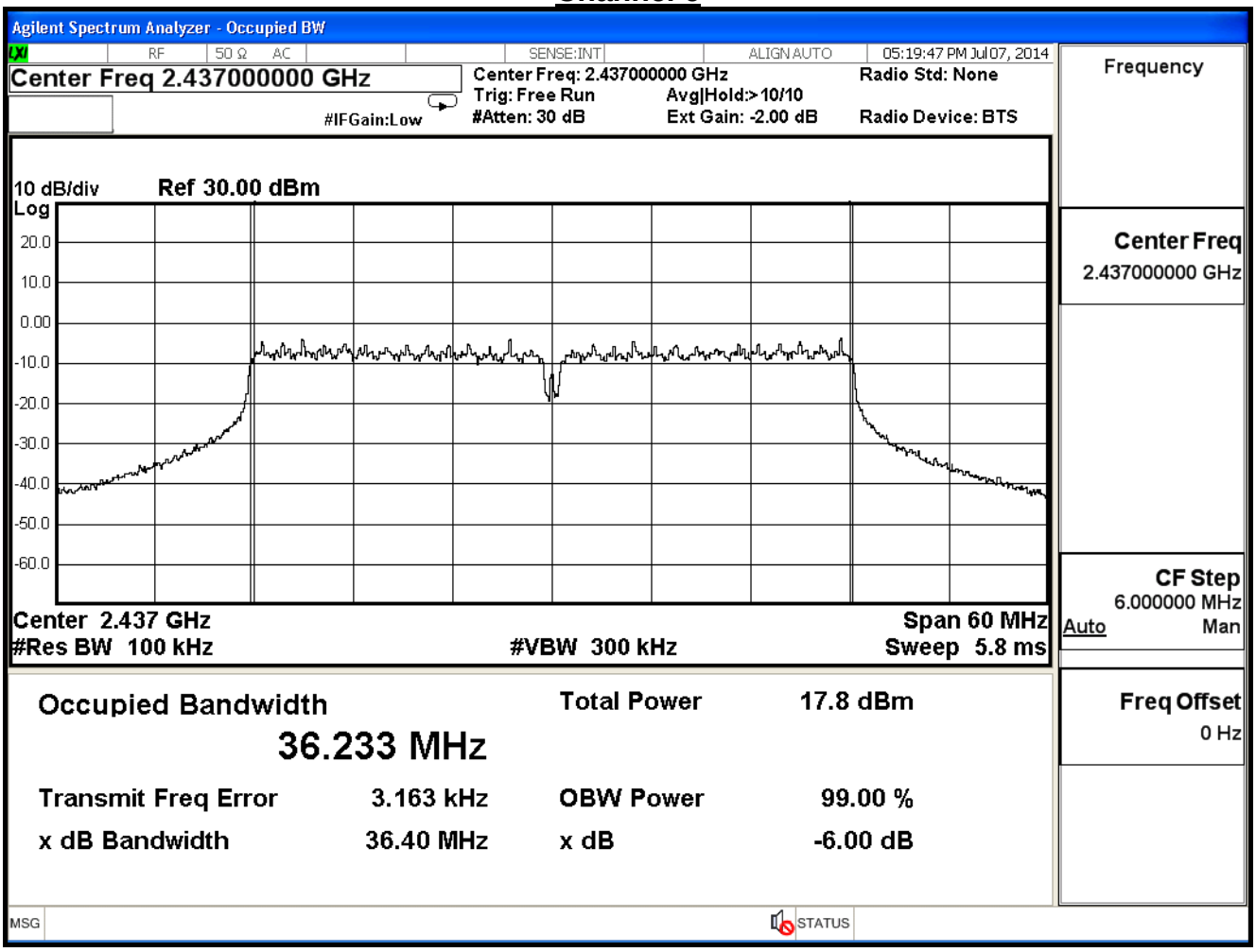
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/09 | Test Site | SR7 |

| IEEE 802.11n (40MHz), ANT 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement Value (MHz) | Required Limit (MHz) | Result |
| 3 | 2422 | 36.40 | ≧0.5 | Pass |
| 6 | 2437 | 36.40 | ≧0.5 | Pass |
| 9 | 2452 | 36.41 | ≧0.5 | Pass |

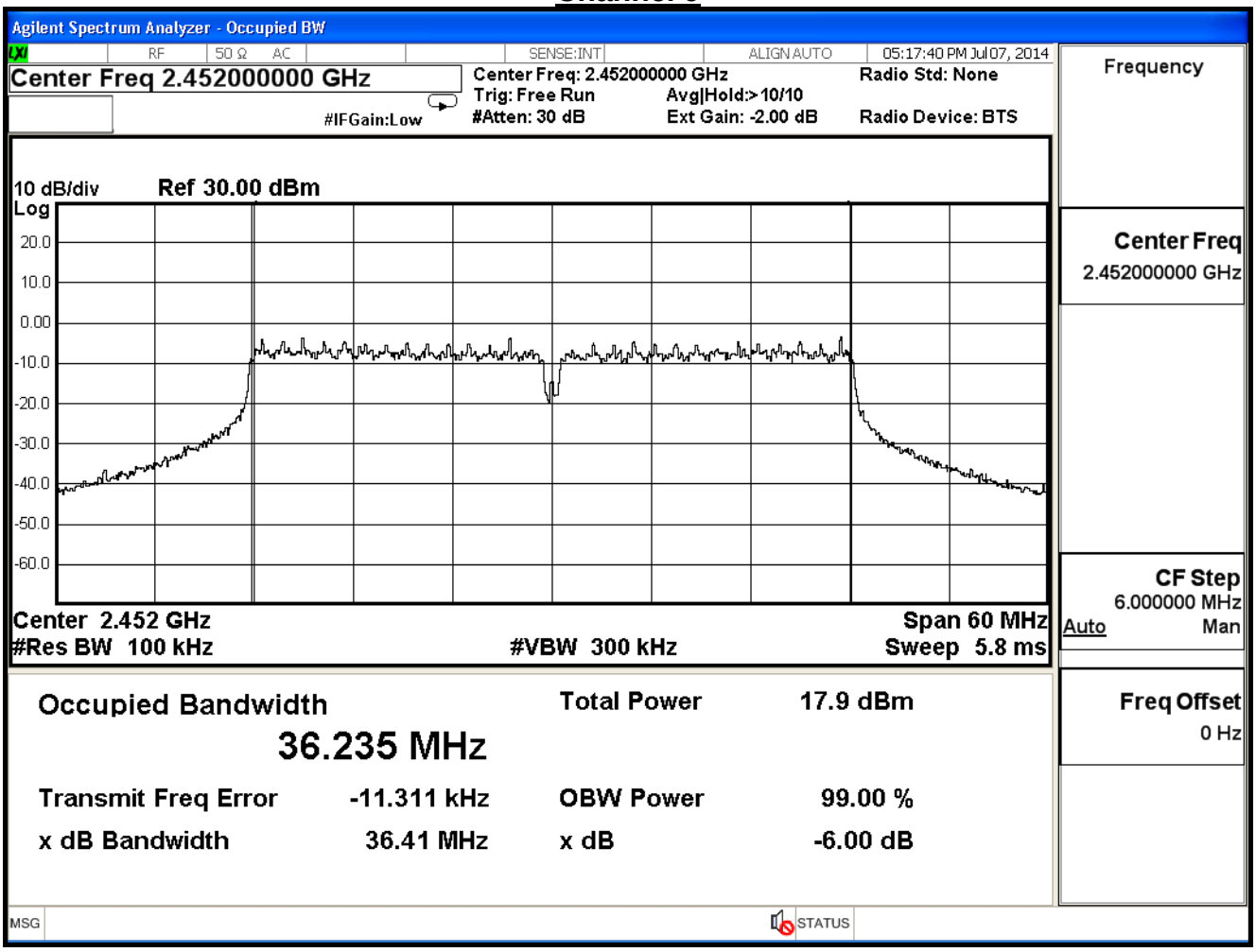
**Channel 3**



## Channel 6


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:19:47 PM Jul 07, 2014
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -2.00 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
CF Step
6.000000 MHz
Auto
Man
Occupied Bandwidth
36.233 MHz
Total Power
17.8 dBm
Transmit Freq Error
3.163 kHz
OBW Power
99.00 %
x dB Bandwidth
36.40 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

## Channel 9


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
05:17:40 PM Jul 07, 2014
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center Freq
2.452000000 GHz
CF Step
6.000000 MHz
Auto
Man
Center 2.452 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
Occupied Bandwidth
36.235 MHz
Total Power
17.9 dBm
Transmit Freq Error
-11.311 kHz
OBW Power
99.00 %
x dB Bandwidth
36.41 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

# 8. Power Density

## 8.1. Test Equipment

The following test equipment is used during the test:

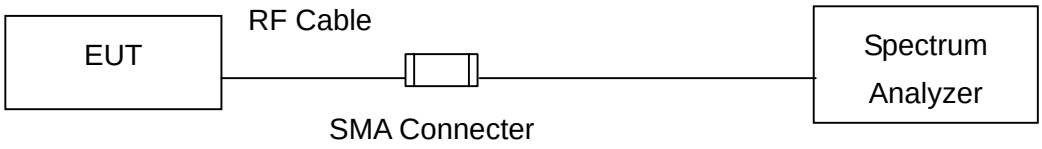
**Power Density / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9010A-EXA | US47140172 | 2014/08/05 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 8.2. Test Setup

IEEE 802.11 b / g / n ( 20M / 40M ) MODE




## 8.3. Limits

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

## 8.4. Test Procedures

The EUT was setup according to ANSI C63.10; tested according to DTS test procedure Section 10.2 of KDB558074 v03r02, Set the 3KHz≦RBW≦100KHz, Set the VBW≧3xRBW, Sweep time=Auto, Set Peak detector, Trace Max Hold.

.

## 8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2013

## 8.6. Uncertainty

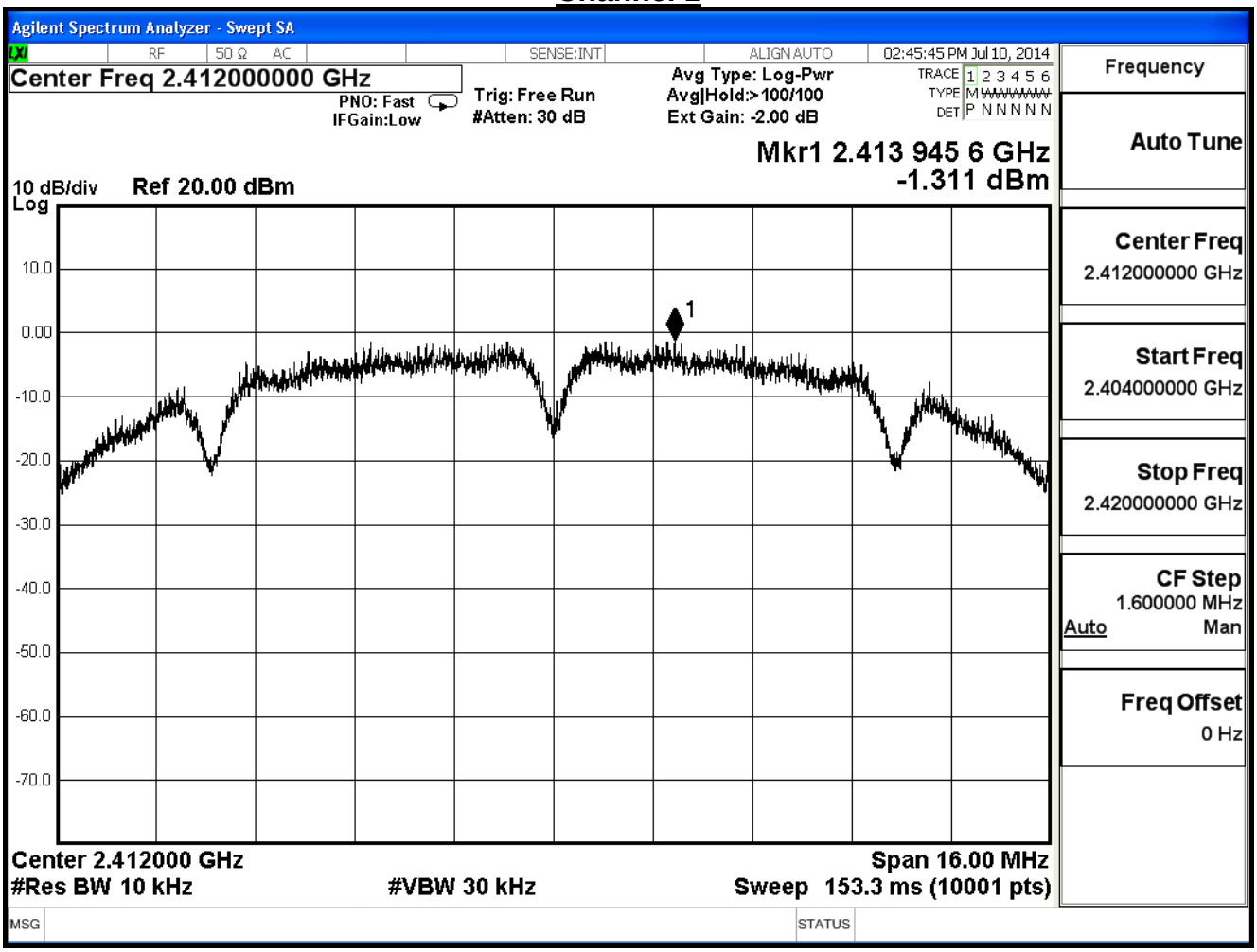
The measurement uncertainty is defined as ±1.27dB.

## 8.7. Test Result

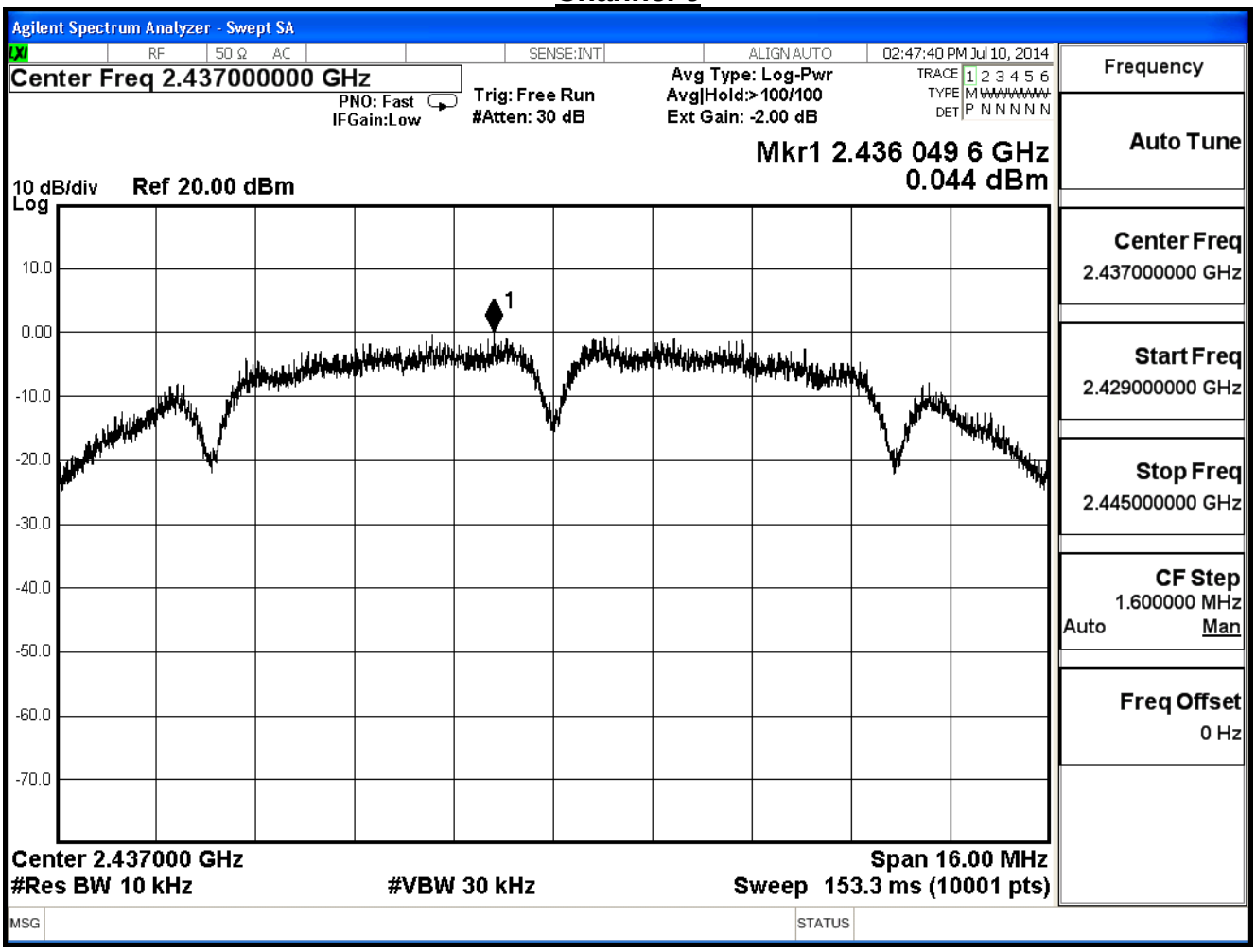
| Product | Wireless Ceiling Access Point | | |
|---|---|---|---|
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11b | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 1 | 2412 | -1.311 | ≦8 | Pass |
| 6 | 2437 | 0.044 | ≦8 | Pass |
| 11 | 2462 | 0.223 | ≦8 | Pass |

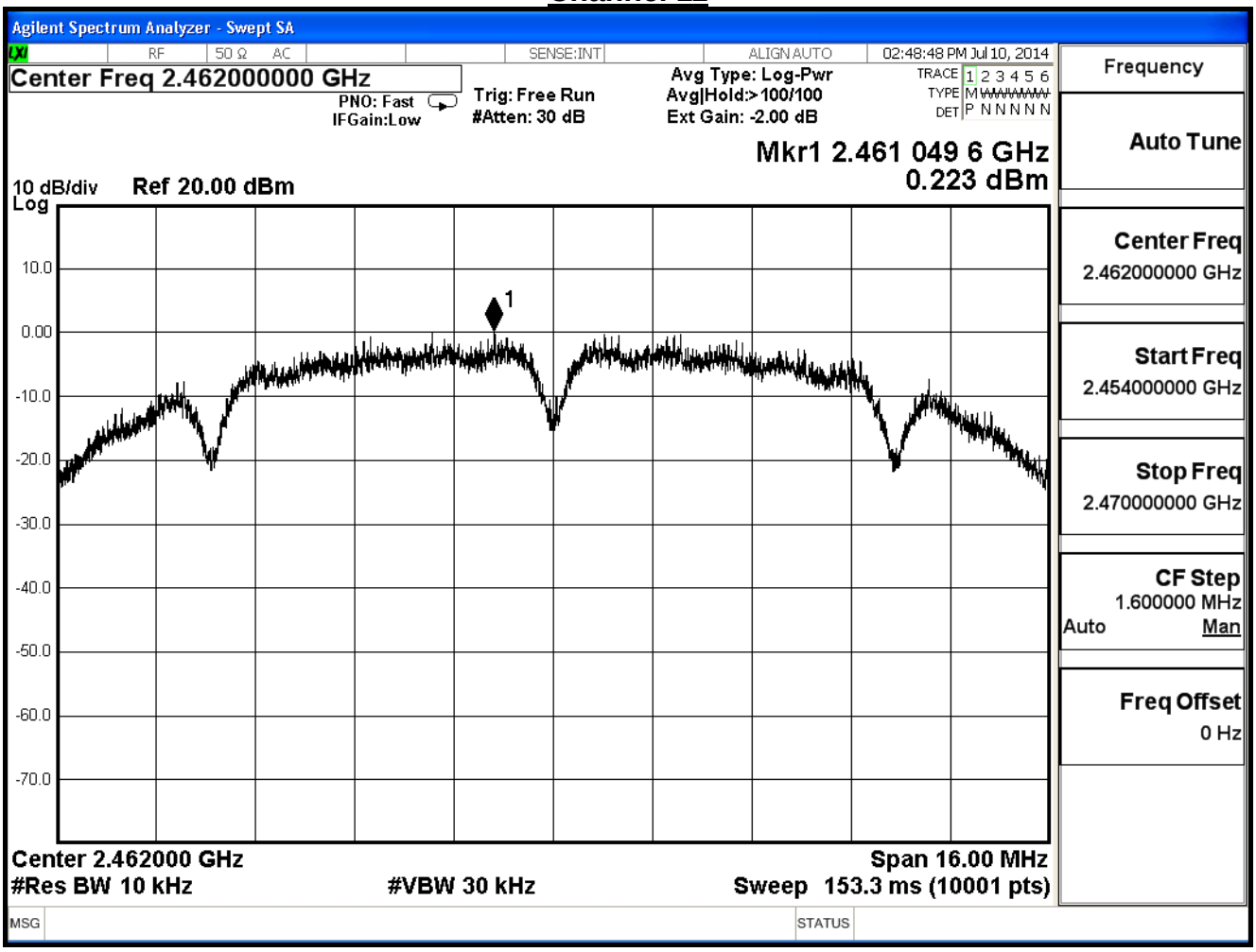
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:47:40 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.436 049 6 GHz
0.044 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.437000 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 16.00 MHz
Sweep 153.3 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.429000000 GHz
Stop Freq
2.445000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

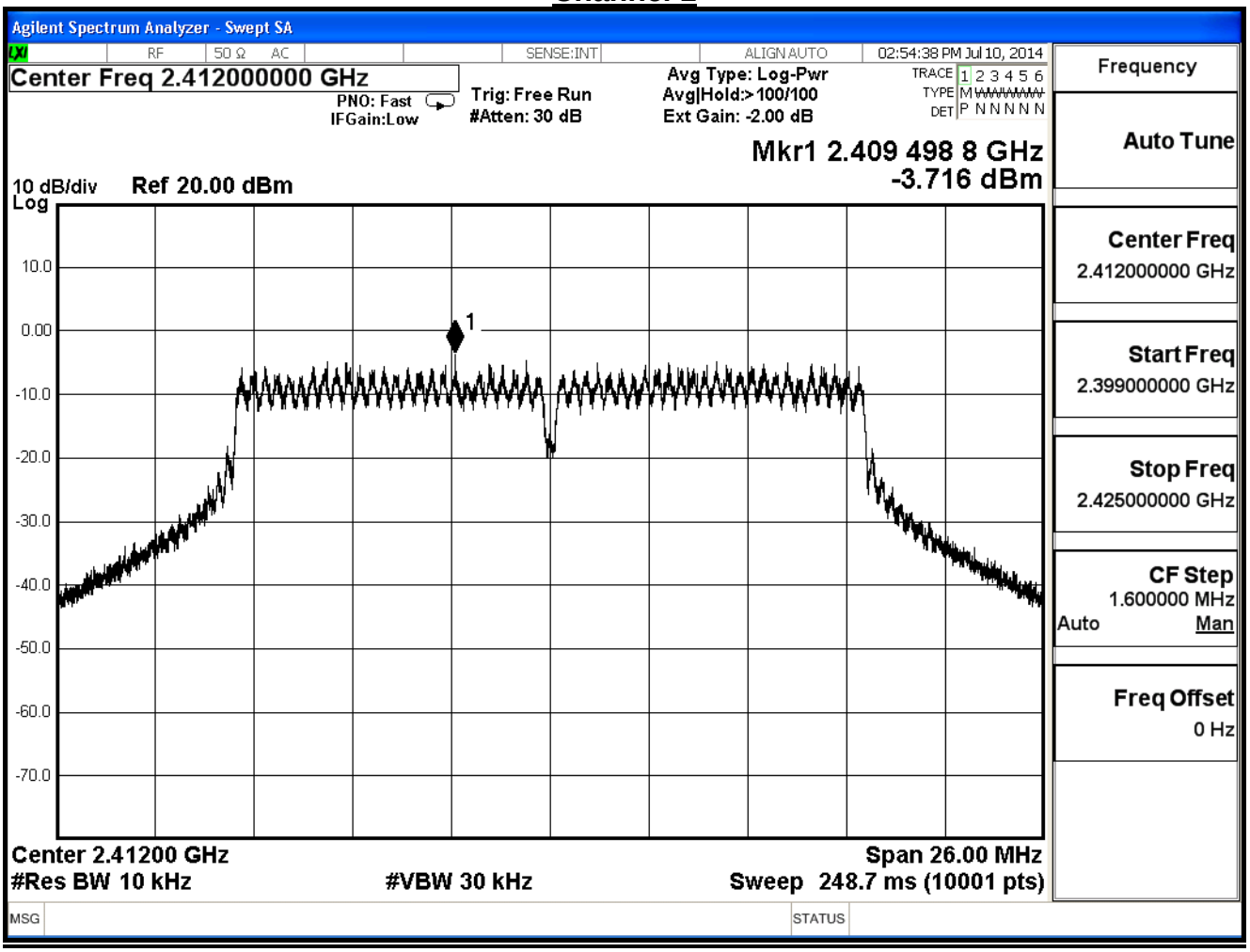
## Channel 11


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:48:48 PM Jul 10, 2014
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.461 049 6 GHz
0.223 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.462000 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 16.00 MHz
Sweep 153.3 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.454000000 GHz
Stop Freq
2.470000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

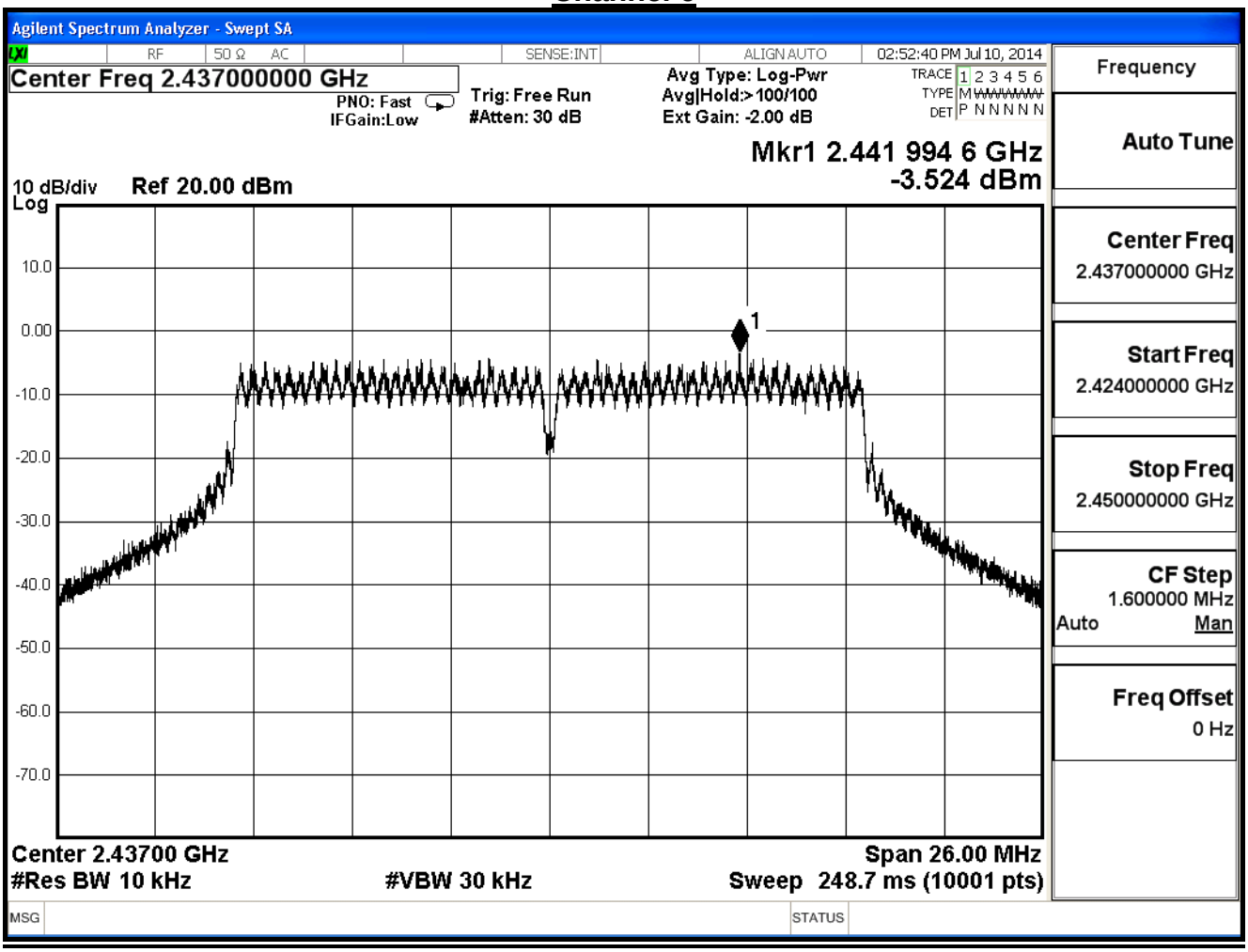
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11g | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 1 | 2412 | -3.716 | ≦8 | Pass |
| 6 | 2437 | -3.524 | ≦8 | Pass |
| 11 | 2462 | -2.921 | ≦8 | Pass |

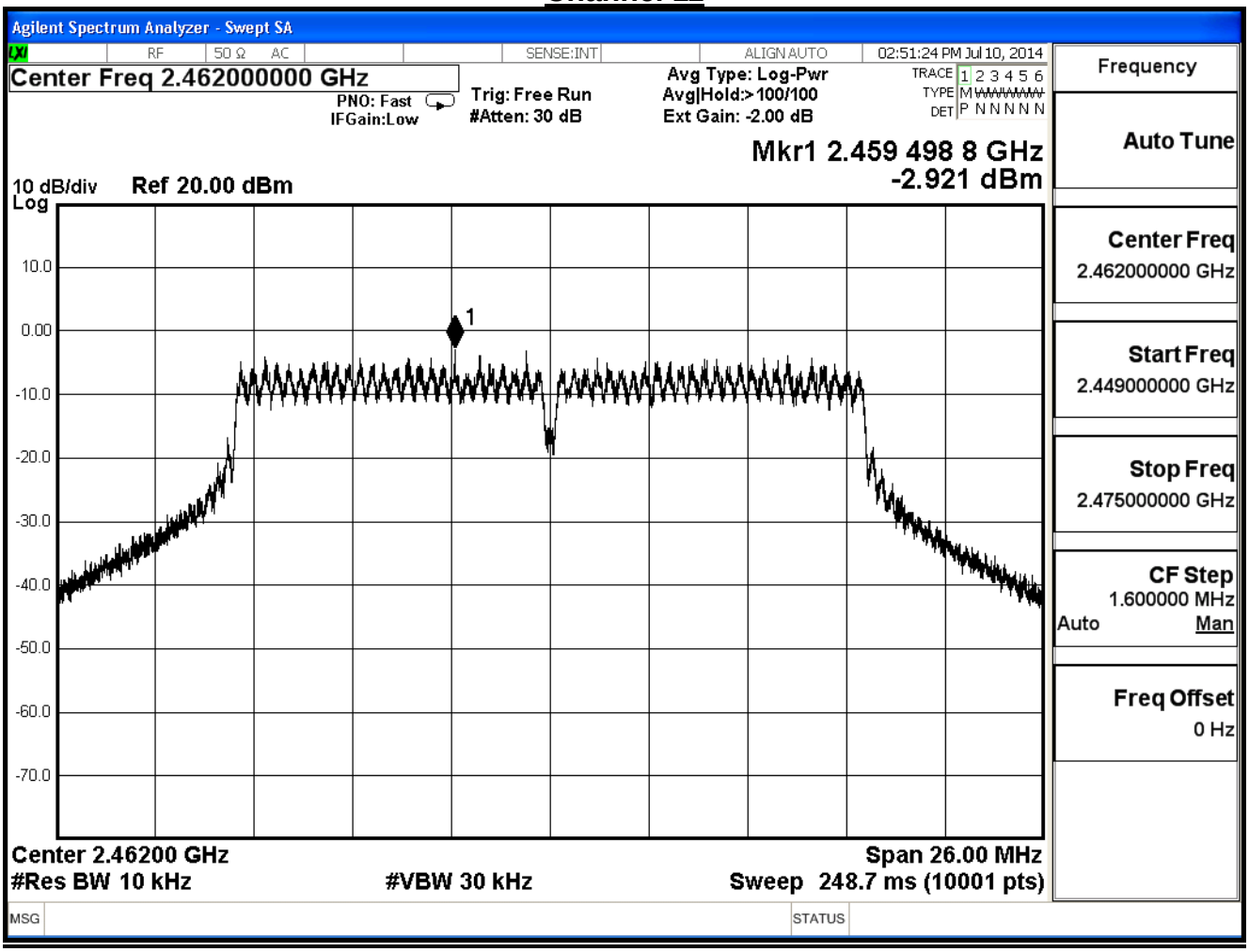
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:52:40 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.441 994 6 GHz
-3.524 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.43700 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.424000000 GHz
Stop Freq
2.450000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

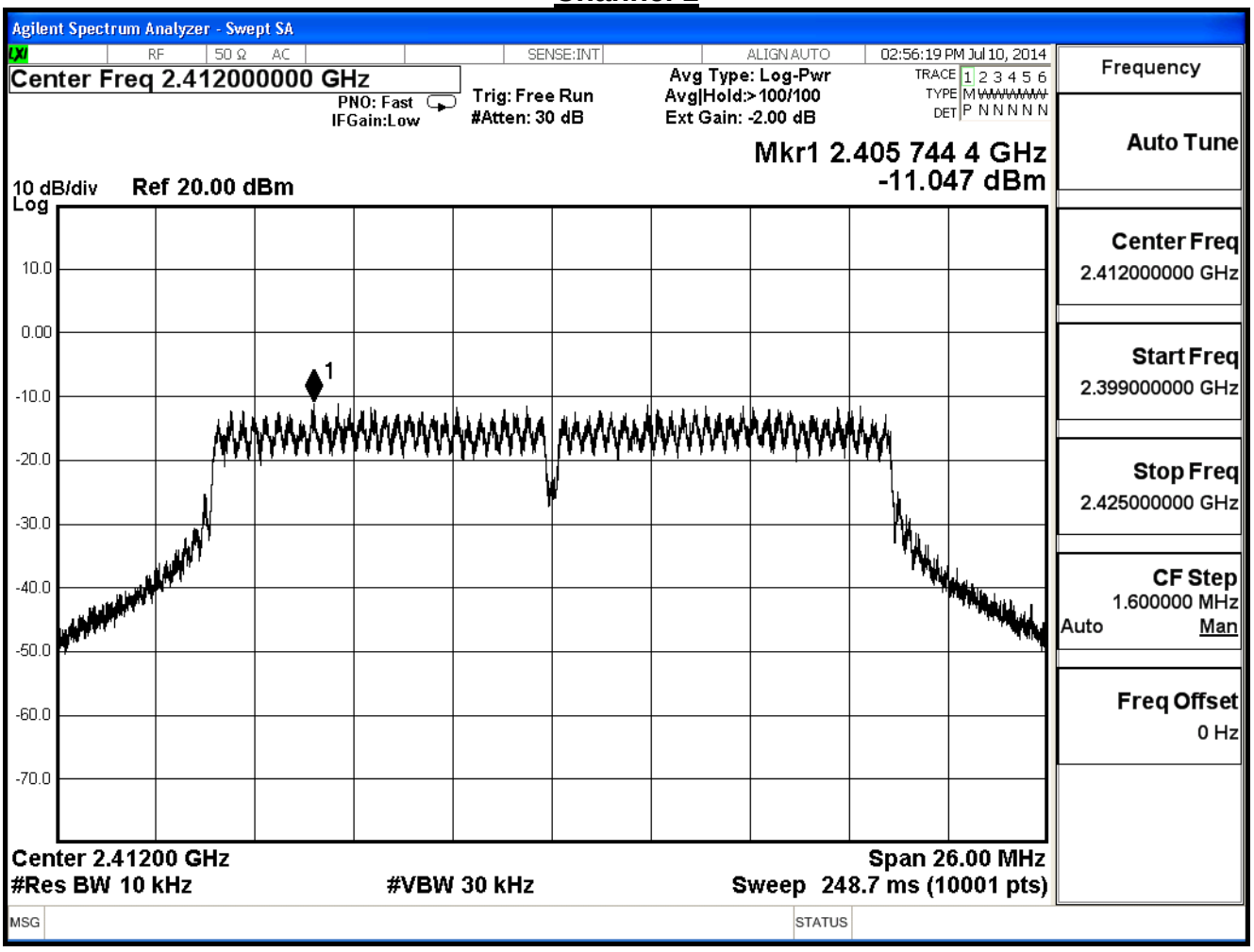
## Channel 11


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:51:24 PM Jul 10, 2014
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.459 498 8 GHz
-2.921 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.46200 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.449000000 GHz
Stop Freq
2.475000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

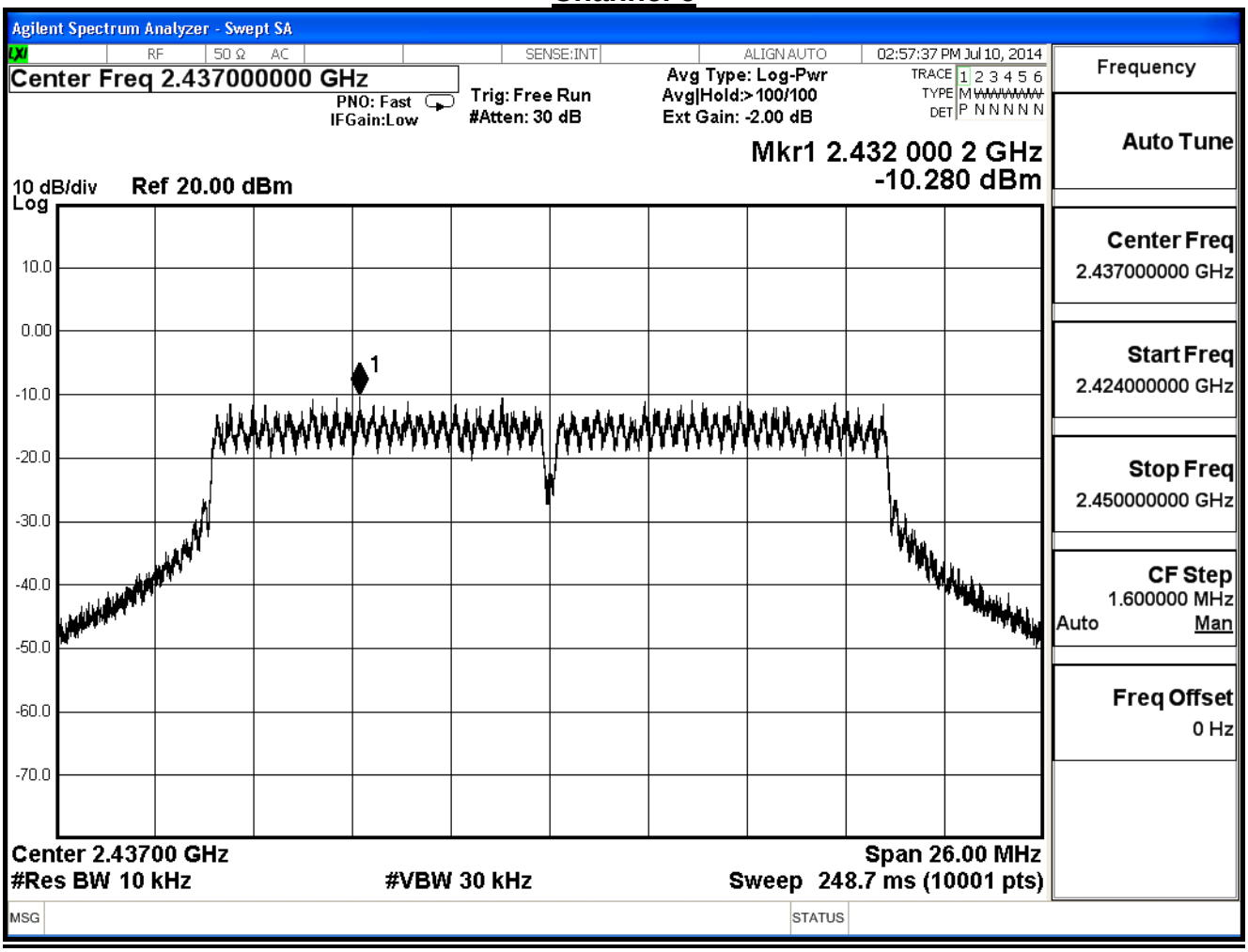
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE802.11n_20MHz, ANT 0 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 1 | 2412 | -11.047 | ≦8 | Pass |
| 6 | 2437 | -10.280 | ≦8 | Pass |
| 11 | 2462 | -10.396 | ≦8 | Pass |

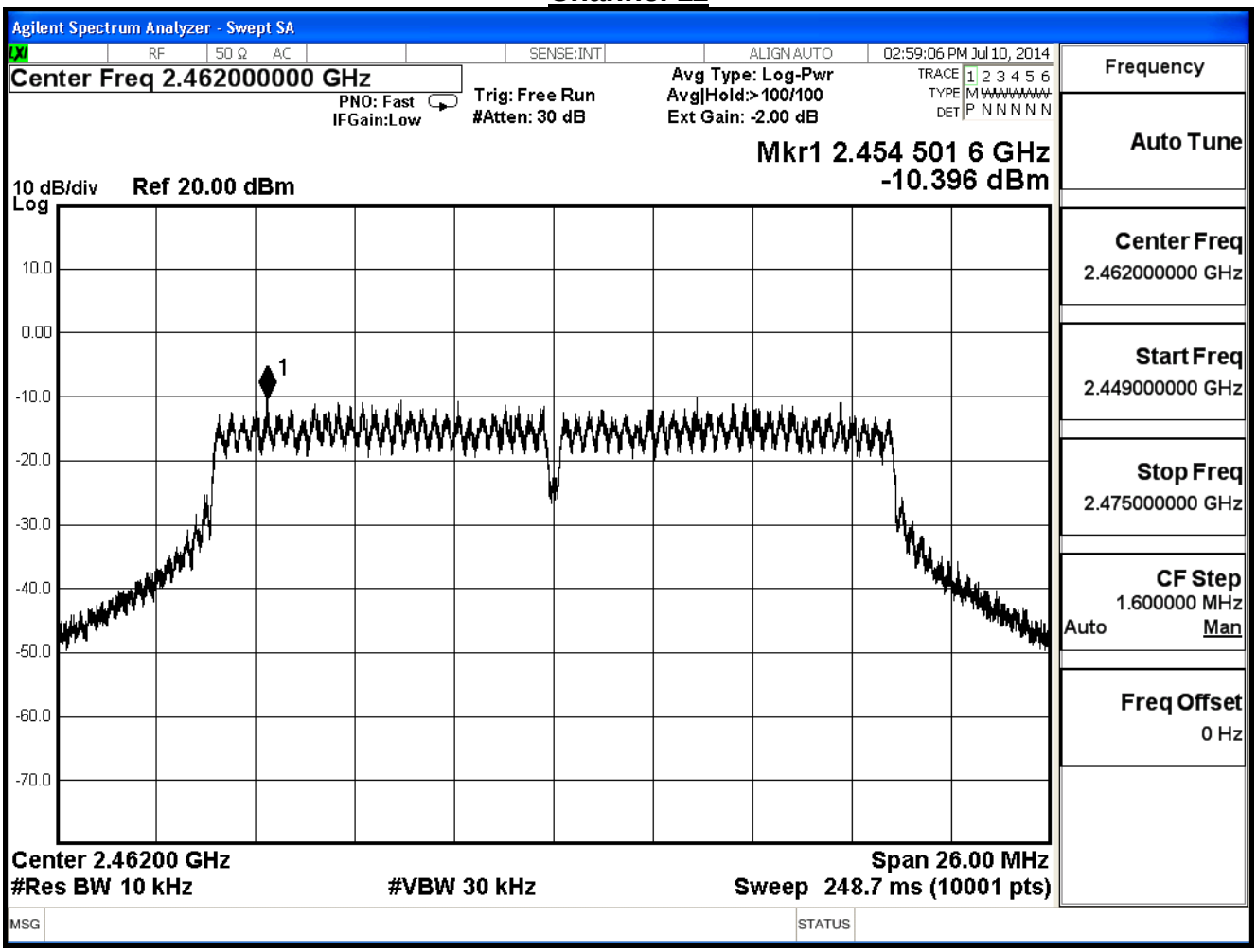
**Channel 1**



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
02:57:37 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.432 000 2 GHz
-10.280 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.43700 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.424000000 GHz
Stop Freq
2.450000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

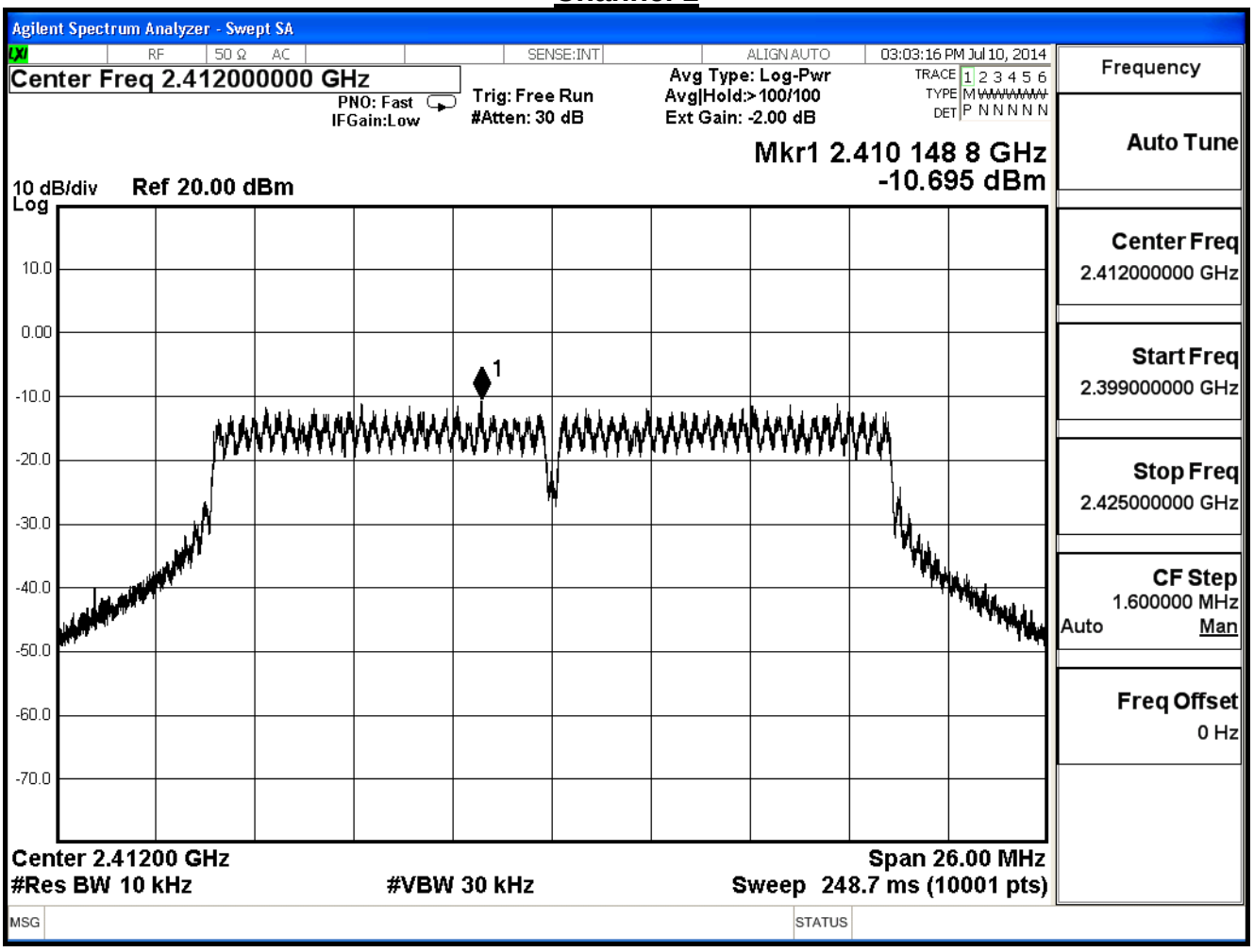
## Channel 11


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
02:59:06 PM Jul 10, 2014
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.454 501 6 GHz
-10.396 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.46200 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.449000000 GHz
Stop Freq
2.475000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

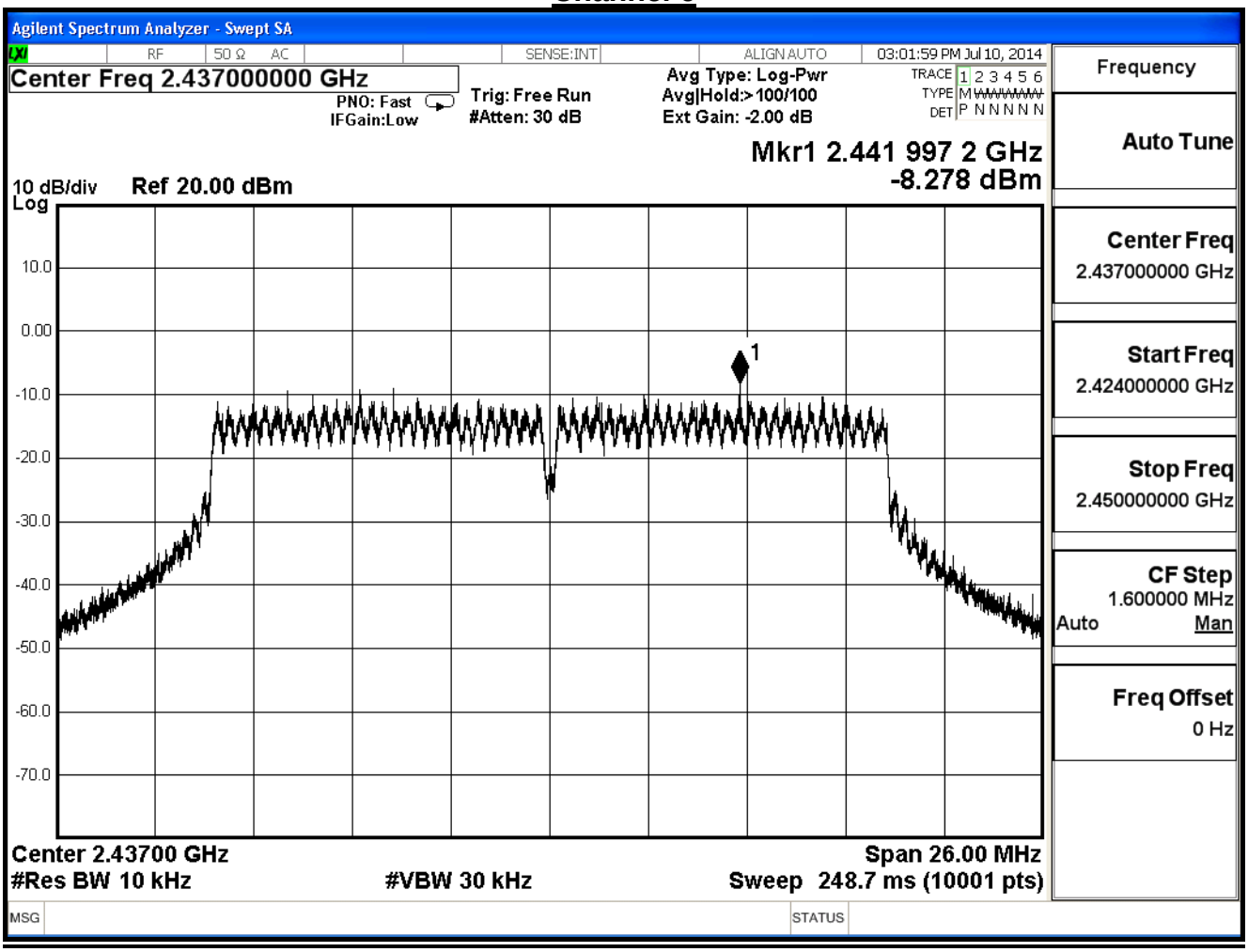
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE802.11n_20MHz, ANT 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 1 | 2412 | -10.695 | ≦8 | Pass |
| 6 | 2437 | -8.278 | ≦8 | Pass |
| 11 | 2462 | -9.567 | ≦8 | Pass |

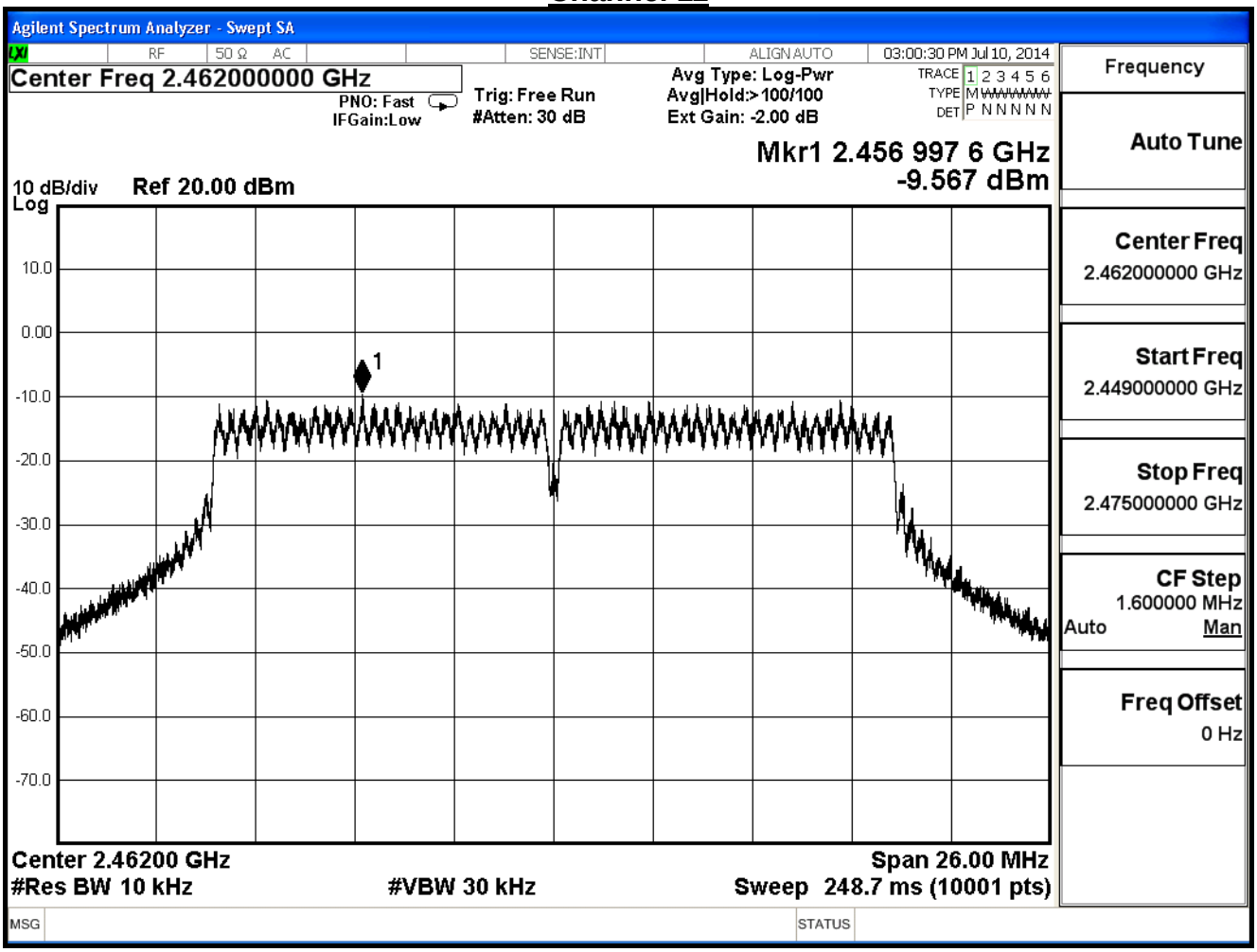
## Channel 1



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
03:01:59 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.441 997 2 GHz
-8.278 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.43700 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.424000000 GHz
Stop Freq
2.450000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

## Channel 11


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
03:00:30 PM Jul 10, 2014
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.456 997 6 GHz
-9.567 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.46200 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 26.00 MHz
Sweep 248.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.449000000 GHz
Stop Freq
2.475000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

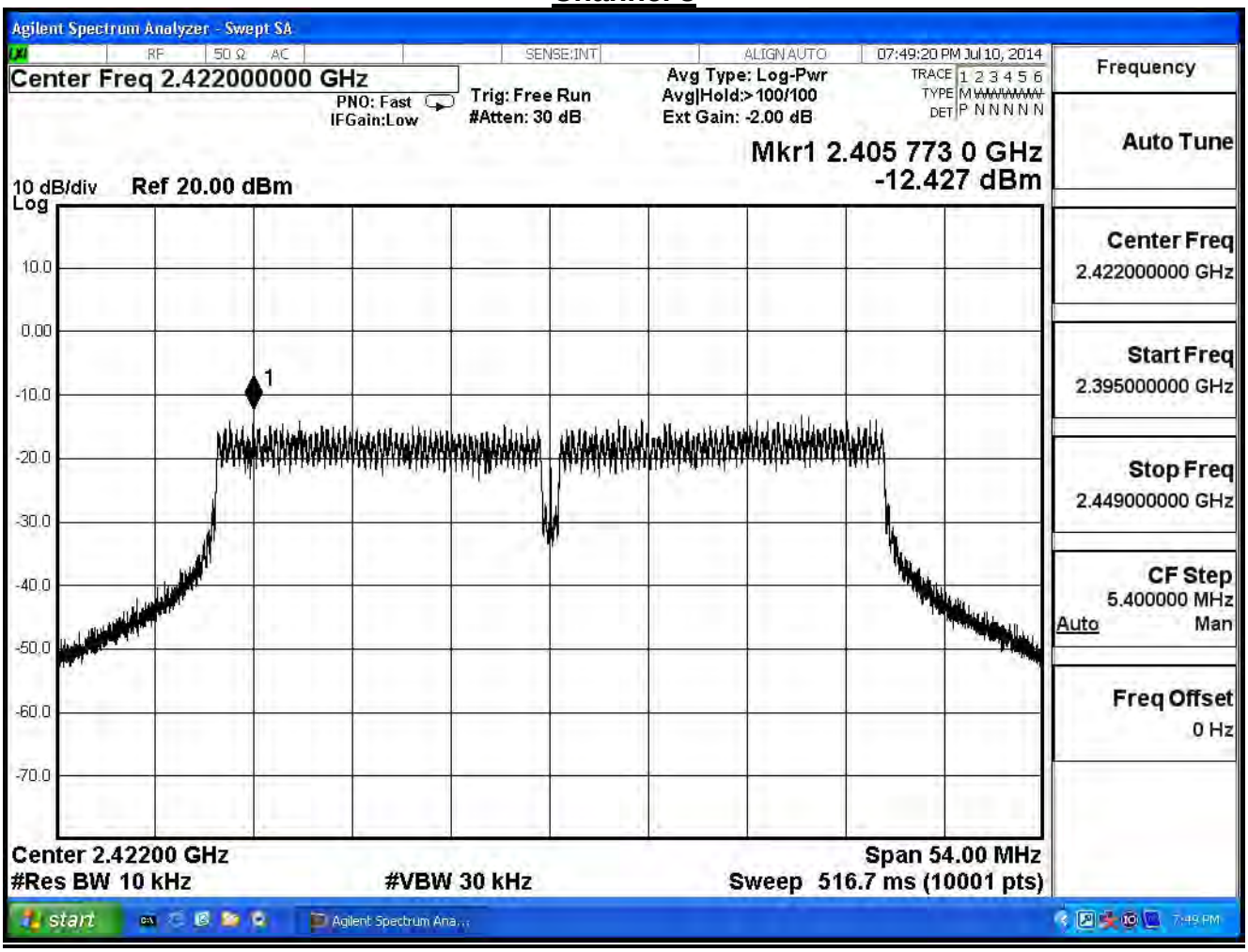
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11n(20MHz) ANT 0+1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 1 | 2412 | -7.859 | ≦8 | Pass |
| 6 | 2437 | -6.154 | ≦8 | Pass |
| 11 | 2462 | -6.953 | ≦8 | Pass |

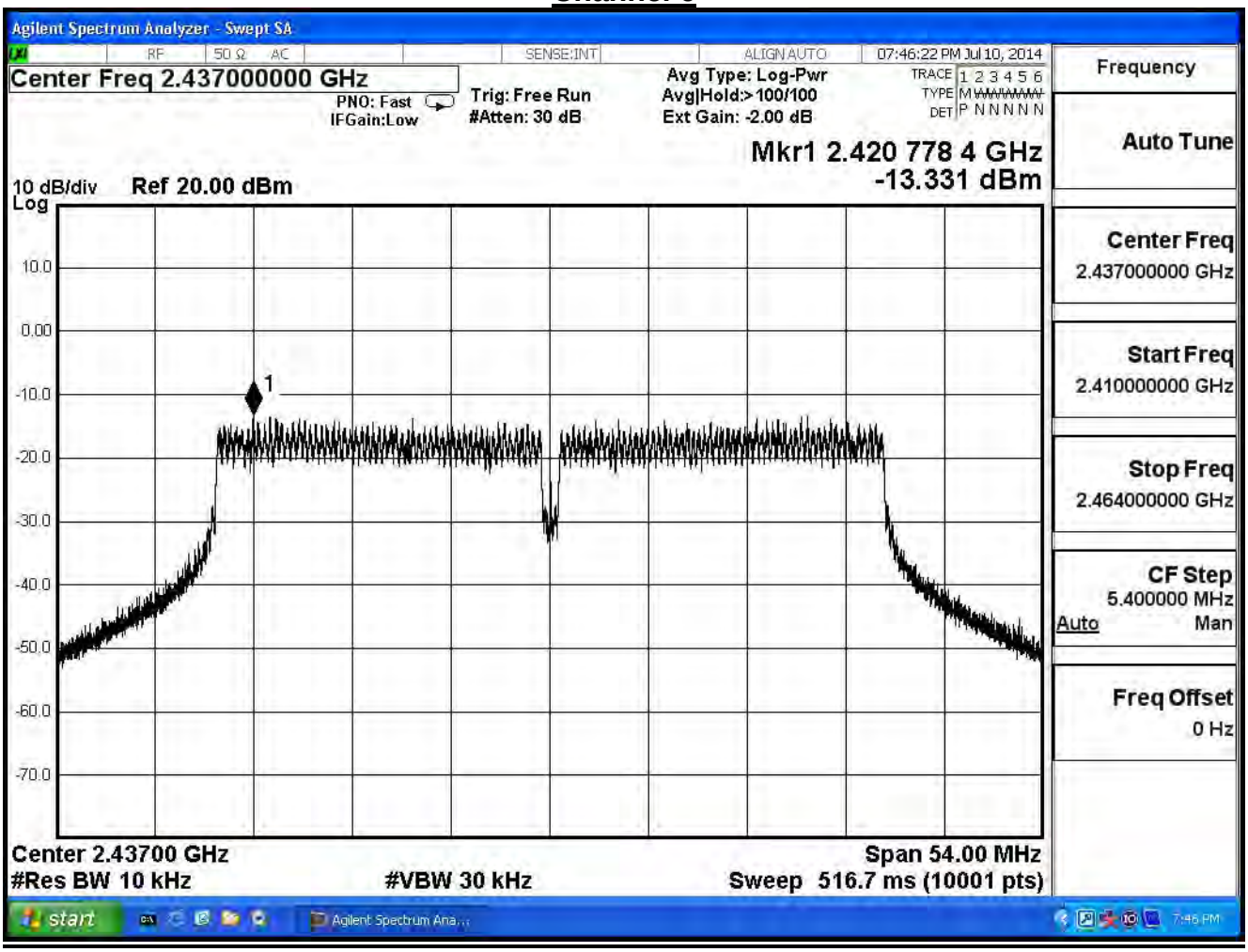
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE802.11n_40MHz, ANT 0 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 3 | 2412 | -12.427 | ≦8 | Pass |
| 6 | 2437 | -13.331 | ≦8 | Pass |
| 9 | 2462 | -12.233 | ≦8 | Pass |

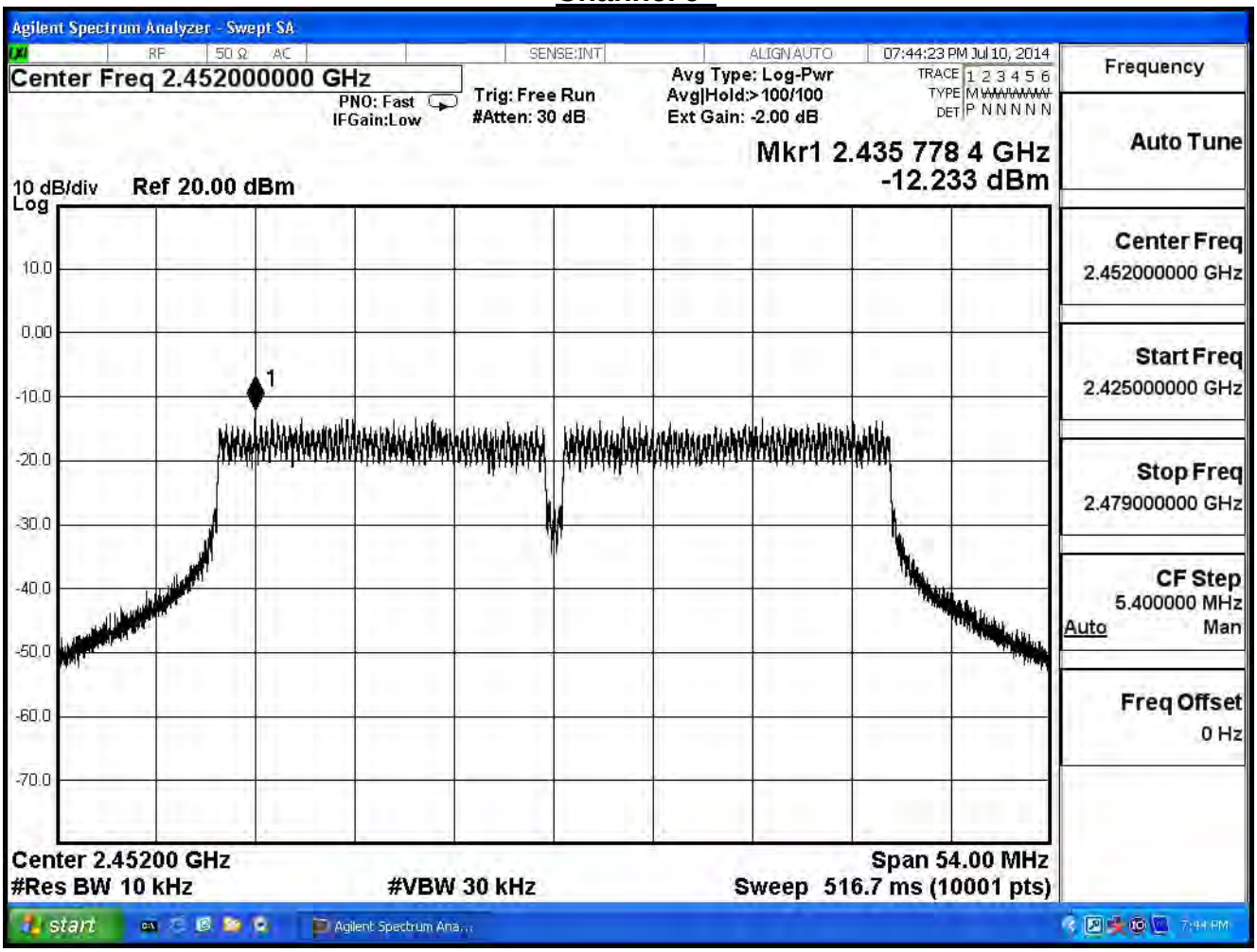
**Channel 3**



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
07:46:22 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.420 778 4 GHz
-13.331 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.43700 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 54.00 MHz
Sweep 516.7 ms (10001 pts)
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.410000000 GHz
Stop Freq
2.464000000 GHz
CF Step
5.400000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:46 PM

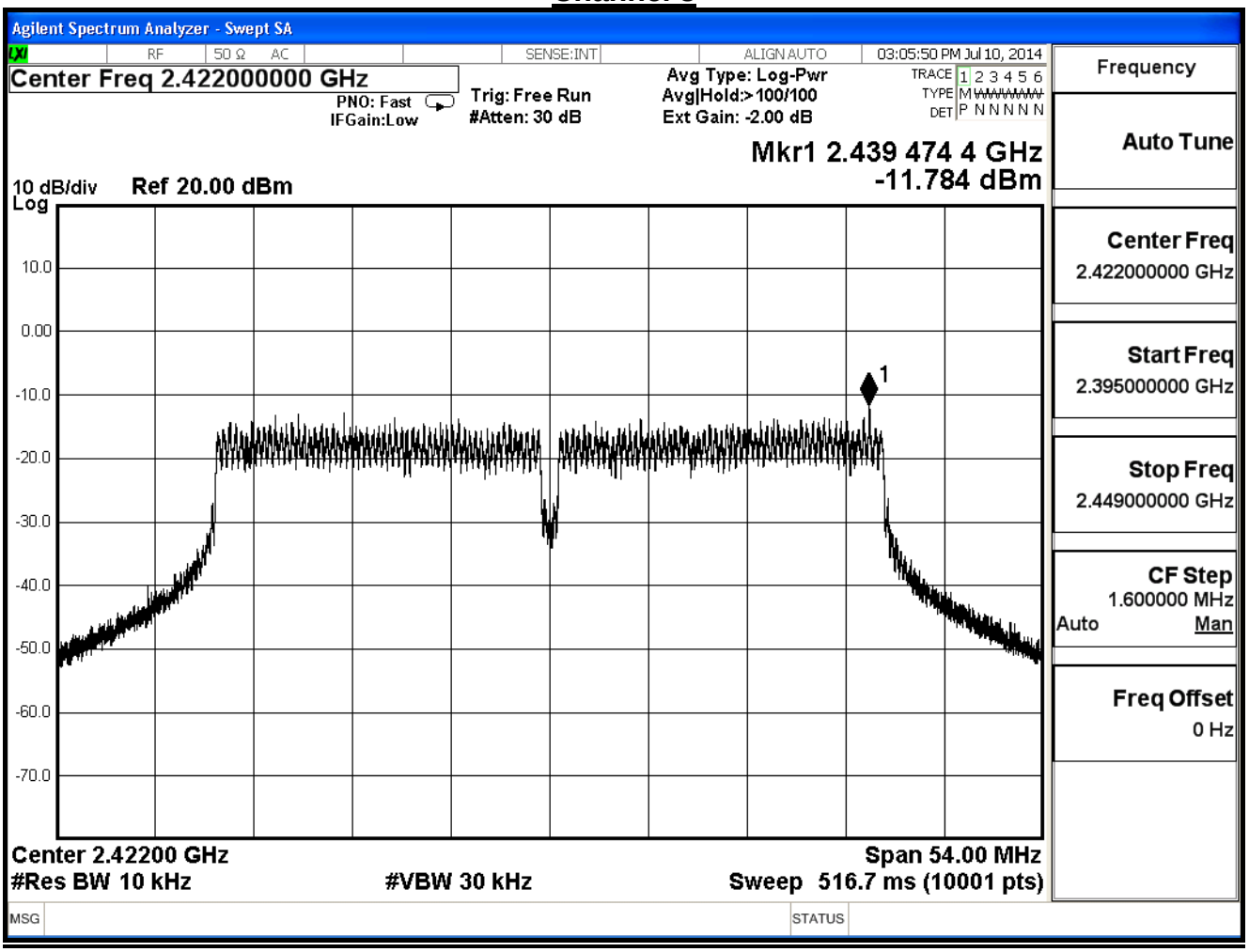
**Channel 9**


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:44:23 PM Jul 10, 2014
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.435 778 4 GHz
-12.233 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.45200 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 54.00 MHz
Sweep 516.7 ms (10001 pts)
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.425000000 GHz
Stop Freq
2.479000000 GHz
CF Step
5.400000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:44 PM

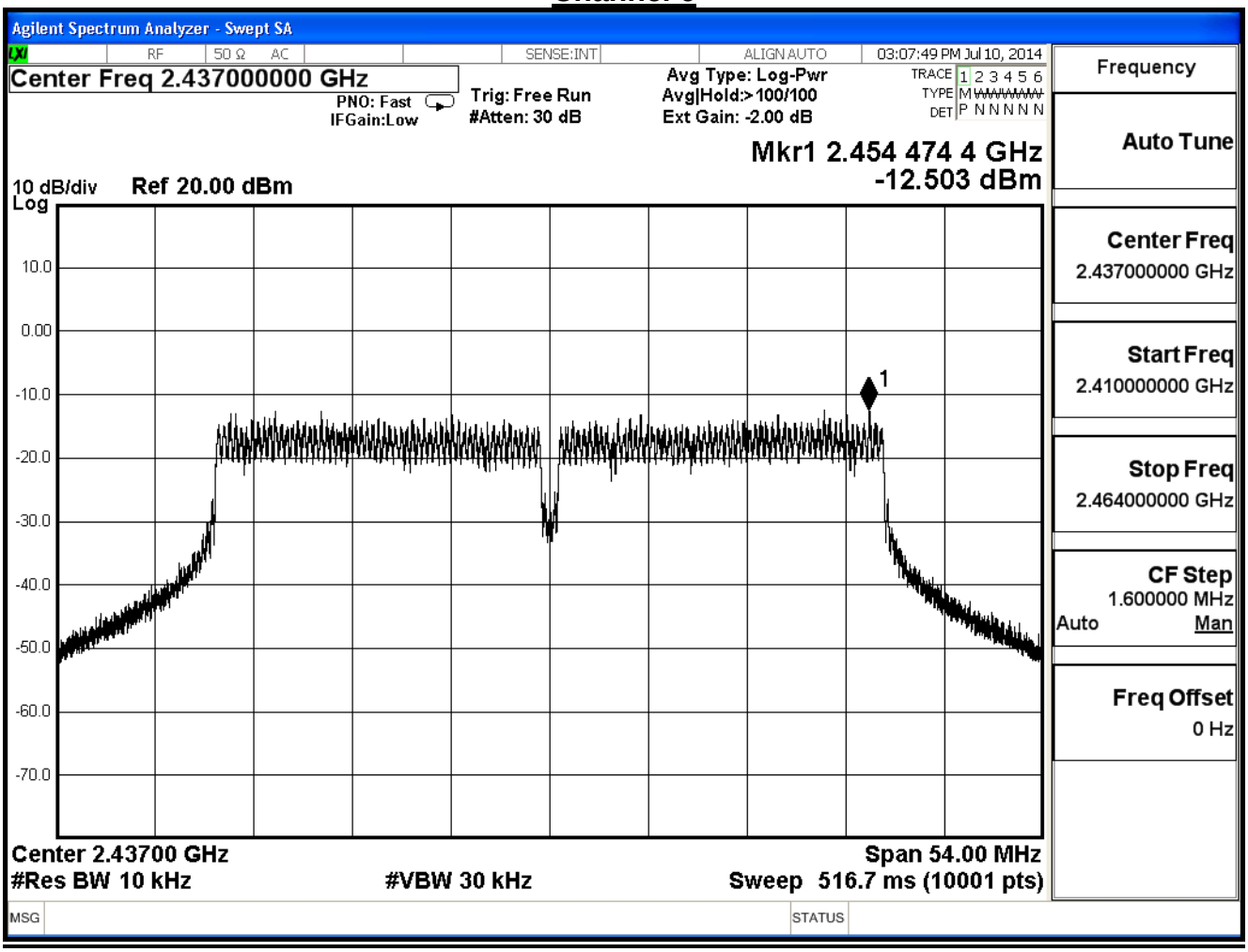
| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE802.11n_40MHz, ANT 1 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measure Level(dBm) | Limit (dBm) | Result |
| 3 | 2422 | -11.784 | ≦8 | Pass |
| 6 | 2437 | -12.503 | ≦8 | Pass |
| 9 | 2452 | -11.874 | ≦8 | Pass |

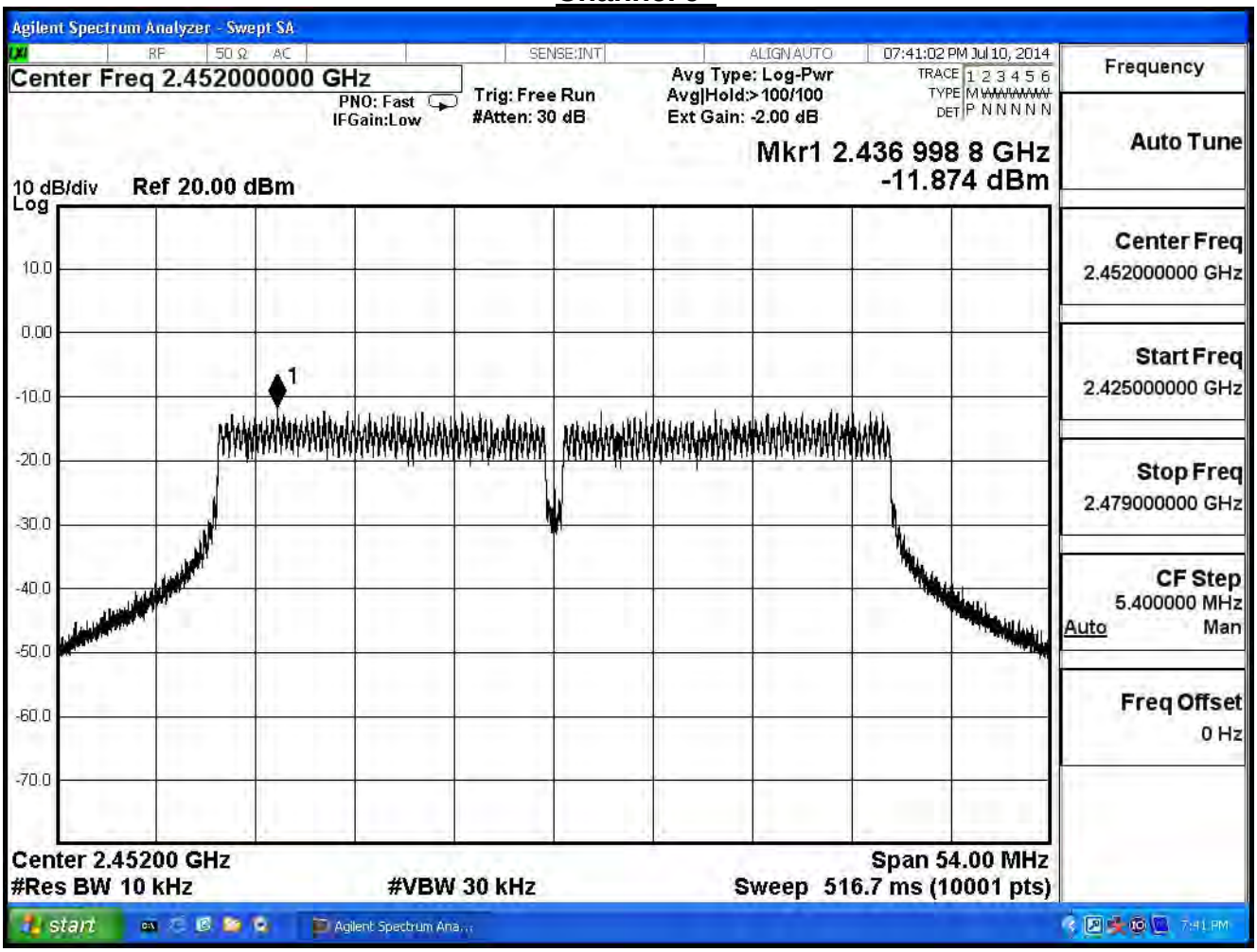
**Channel 3**



## Channel 6


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
03:07:49 PM Jul 10, 2014
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.454 474 4 GHz
-12.503 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.43700 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 54.00 MHz
Sweep 516.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.410000000 GHz
Stop Freq
2.464000000 GHz
CF Step
1.600000 MHz
Auto
Man
Freq Offset
0 Hz

**Channel 9**


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
07:41:02 PM Jul 10, 2014
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.436 998 8 GHz
-11.874 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.45200 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 54.00 MHz
Sweep 516.7 ms (10001 pts)
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.425000000 GHz
Stop Freq
2.479000000 GHz
CF Step
5.400000 MHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
7:41 PM

| | | | |
|---|---|---|---|
| Product | Wireless Ceiling Access Point | | |
| Test Item | Power Density | | |
| Test Mode | Mode 1: Transmit | | |
| Date of Test | 2014/07/08 | Test Site | SR7 |

| IEEE 802.11n(40MHz) (Worse Condition+10log(Ant N))=Ant0 | | | | |
|---|---|---|---|---|
| Channel No. | Frequency (MHz) | Measurement (dBm) | Limit (dBm) | Result |
| 3 | 2422 | -9.085 | ≦8 | Pass |
| 6 | 2437 | -9.887 | ≦8 | Pass |
| 9 | 2452 | -9.038 | ≦8 | Pass |