



Lab Code: 200167-0



FCC PART 15 SUBPART 247

TEST AND MEASUREMENT REPORT

For

Club Car Inc.

4125 Washington Rd., Augusta, GA 30917-4658

FCC ID: W4U-103514101
Model: 103514101

Report Type: Original Report	Product Type: Wi-Fi/GPS Tracking System
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Report Number:	R0812082-247
Report Date:	2009-02-26
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* This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk “*” (20-0000)

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R0812082-247	Original Report	2009-02-26

1 GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

The *Club Car, Inc.* product, FCC ID: *W4U-103514101*, model: *103514101* or the “EUT” as referred to in this report is a WiFi/GPS tracking system. It contains an 802.11 b/g Wi-Fi module. The EUT is powered by a 12VDC power source.

1.2 Mechanical Description of EUT

The EUT measures approximately *250 mm L x 260 mm W x45 mm H*.

** The test data gathered are from typical production sample, serial number: 51750049080074, provided by the manufacturer.*

1.3 EUT Photo



Please refer to Exhibit C for more EUT photographs.

1.4 Objective

This original measurement and test report is prepared on behalf of *Club Car, Inc.* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for Radiated Spurious Emissions, Restrict Band and Receiver Radiated Spurious Emission.

1.5 Related Submittal(s)/Grant(s)

FCC ID: U9R-W2SW0001, Report No.: R0708036 for 802.11 b/g RF module

1.6 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.7 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the values range from ± 2.0 for Conducted Emissions tests and ± 4.0 dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL.

Detailed instrumentation measurement uncertainties can be found in BACL report QAP-018.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.8 Test Facility

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test sites at BACL have been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission, Industry Canada, and Voluntary Control Council for Interference has the reports on file and is listed under FCC registration number: 90464, IC registration number: 3062A, and VCCI Registration Number: C-2463 and R-2698. The test site has been approved by the FCC, IC, and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2001670.htm>

2 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT and its host were configured for testing according to ANSI C63.4-2003.

The EUT was tested in a testing mode to represent *worst*-case results during the final qualification test.

The worst-case data rates are determined to be as follows for each mode based upon investigation by measuring the average power, peak power and PPSD across all data rates bandwidths, and modulations.

2.2 EUT Exercise Software

The software to exercise the unit was provided by the client.

2.3 Equipment Modifications

No modifications were made to the EUT.

2.4 Special Accessories

N/A

2.5 Power Supply and Line Filters

N/A

2.6 Internal Parts List and Details

Manufacturer	Description	Model	Serial Number
Club Car Inc	Main PCB Board	103514401	50960046080301
Club Car Inc	LCD PCB Board	103514402 Rev B	51680047080146

2.7 Interface Ports and Cabling

Cable Description	Length (m)	From	To
DC Power Cable	< 3m	EUT	DC Power Source

3 SUMMARY OF TEST RESULTS

Results reported relate only to the product tested.

FCC Rules	Description of Test	Result
§15.247(i) §2.1091	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§ 15.207 (a)	Conducted Emissions	N/A*
§2.1051 & §15.247(d)	Spurious Emissions at Antenna Port	N/A*
§15.205	Restricted Bands	Compliant
§15.209, §15.205 & §15.247(d)	Radiated Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Bandwidth	N/A*
§15.247 (b)(3)	Maximum Peak Output Power	N/A*
§ 15.247 (d)	100 kHz Bandwidth of Frequency Band Edge	N/A*
§15.247 (e)	Power Spectral Density	N/A*

Note: N/A * please refer to the FCC ID: U9R-W2SW0001, Report No.: R0708036

4 FCC §15.247 (i) and §2.1091 - RF EXPOSURE

4.1 Applicable Standard

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

4.2 MPE Prediction

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

<u>Maximum peak output power at antenna input terminal (dBm):</u>	<u>14.77</u>
<u>Maximum peak output power at antenna input terminal (mW):</u>	<u>29.991</u>
<u>Prediction distance (cm):</u>	<u>20</u>
<u>Prediction frequency (MHz):</u>	<u>2437</u>
<u>Maximum Antenna Gain, typical (dBi):</u>	<u>2.0</u>
<u>Maximum Antenna Gain (numeric):</u>	<u>1.585</u>
<u>Power density of prediction frequency at 20.0 cm (mW/cm²):</u>	<u>0.00946</u>
<u>MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):</u>	<u>1.0</u>

4.3 Test Result

The power density level at 20 cm is 0.00946 mw/cm², which is below the uncontrolled exposure limit of 1.0mW/cm² at 2437 MHz.

5 FCC §15.203 – ANTENNA REQUIREMENT

5.1 Applicable Standard

According to FCC §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

And according to FCC §15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

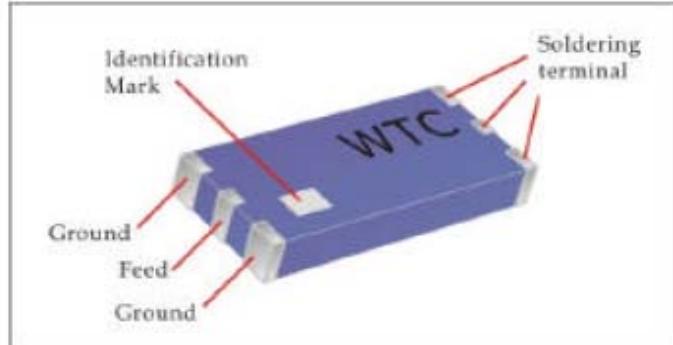
5.2 Result

The antenna, model: LTCC Multi Layer Chip Antenna for this device is an internal chip antenna. It has a max gain of 2 dBi which fulfills the requirements of FCC rule 15.203

Compliant

N/A

Please refer to the following antenna photo for details.



Outline of 2.4GHz Chip Antenna

Antenna photo

6 §15.205, §15.209 & §15.247(d) - SPURIOUS RADIATED EMISSIONS

6.1 Applicable Standard

As per 15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As per 15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As Per 15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	960 – 1240	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5.35 – 5.46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 – 167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3.3458 – 3.358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

As Per 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

6.2 Test Setup

The radiated emissions tests were performed in the 3-meter open area test site, using the setup in accordance with ANSI C63.4-2003. The specification used was the FCC 15 Subpart C limits.

6.3 EUT Setup

The radiated emissions tests were performed using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15C limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

The EUT is powered by 12Vdc power source.

6.4 Test Equipment List and Details

Manufacturers	Description	Models	Serial Numbers	Calibration Dates
Antenna Research Association	Horn Antenna	DRG-1181A	1132	2008-07-28
AH Systems	Horn Antenna	SAS200/571	261	2008-07-01
Agilent	Pre-Amplifier	8449B	3008A01978	2008-10-21
Agilent	Spectrum Analyzer	E4440A	US45303156	2008-05-31
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.595 0K03	100044	2008-03-26

* **Statement of Traceability:** BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

6.5 Test Procedure

For the radiated emissions test, the EUT, and all support equipment power cords was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

The spectrum analyzer or receiver is set as:

Below 1000MHz:

$$\text{RBW} = 100 \text{ kHz} / \text{VBW} = 300 \text{ kHz} / \text{Sweep} = \text{Auto}$$

Above 1000MHz:

- (1) Peak: $\text{RBW} = 1\text{MHz} / \text{VBW} = 1\text{MHz} / \text{Sweep} = \text{Auto}$
- (2) Average: $\text{RBW} = 1\text{MHz} / \text{VBW} = 10\text{Hz} / \text{Sweep} = \text{Auto}$

6.6 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corrected Amplitude} - \text{FCC Limit}$$

6.7 Environmental Conditions

Temperature:	21.3 °C
Relative Humidity:	43 %
ATM Pressure:	101.7kPa

*The testing was performed by Victor Zhang from 2008-12-11.

6.8 Summary of Test Results

According to the data hereinafter, the EUT complied with the limits presented in FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247, and had the worst margin of:

802.11 b mode:

Harmonics & Spurious, (30-1000 MHz):

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Channel, Range
-4.02	511.859	Horizontal	Middle, 30 MHz – 1GHz

Harmonics & Spurious, (Above 1 GHz)

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Channel, Range
-13.10	4824	Vertical	Low, 1GHz – 25GHz
-11.45	4874	Vertical	Mid, 1GHz – 25GHz
-14.06	4924	Vertical	High, 1GHz – 25GHz

802.11 g mode:

Harmonics & Spurious, (30-1000 MHz):

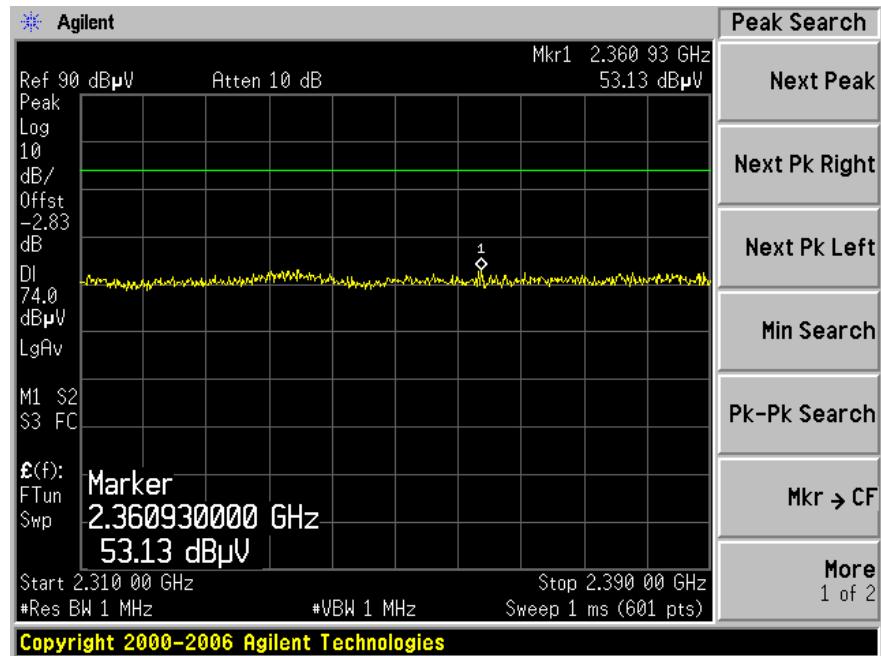
Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Channel, Range
-3.87	492.358	Horizontal	Middle, 30 MHz – 1GHz

Harmonics & Spurious, (Above 1 Hz)

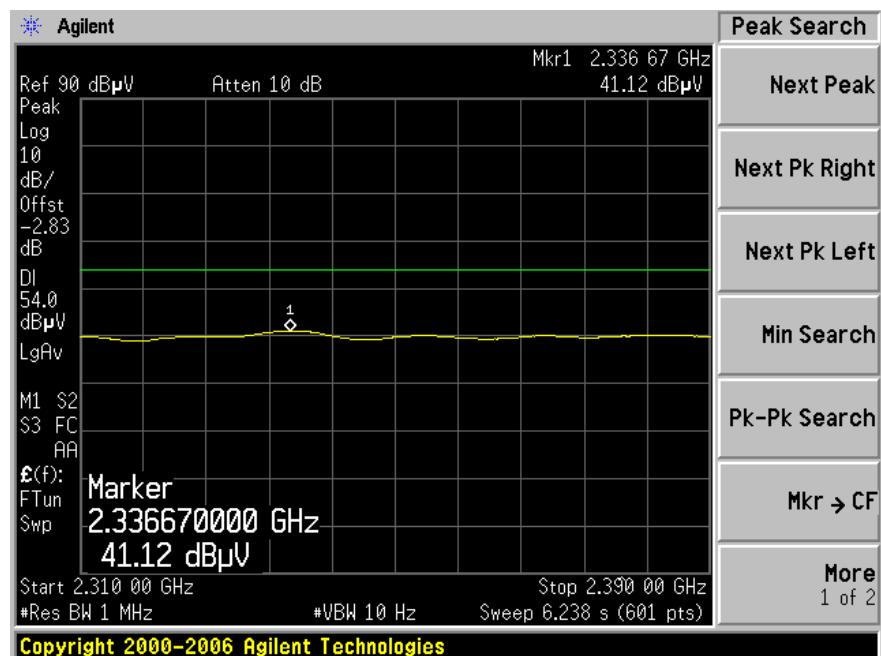
Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Channel, Range
-16.63	4824	Vertical	Low, 1GHz – 25GHz
-16.09	4874	Vertical	Mid, 1GHz – 25GHz
-19.13	4924	Vertical	High, 1GHz – 25GHz

Out of Band Emissions

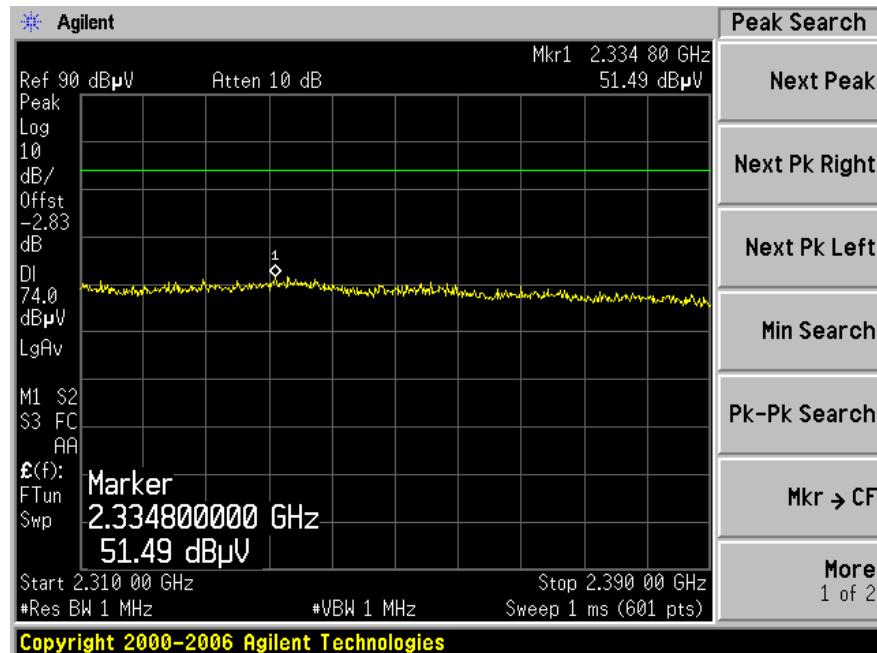
802.11 b (Low channel) at Horizontal Peak



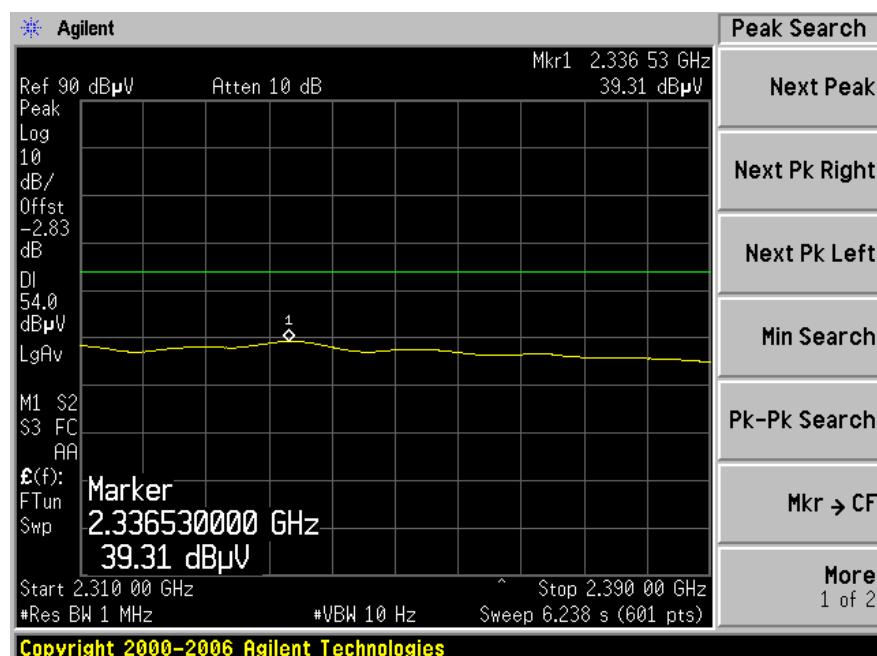
802.11 b (Low channel) at Horizontal Average



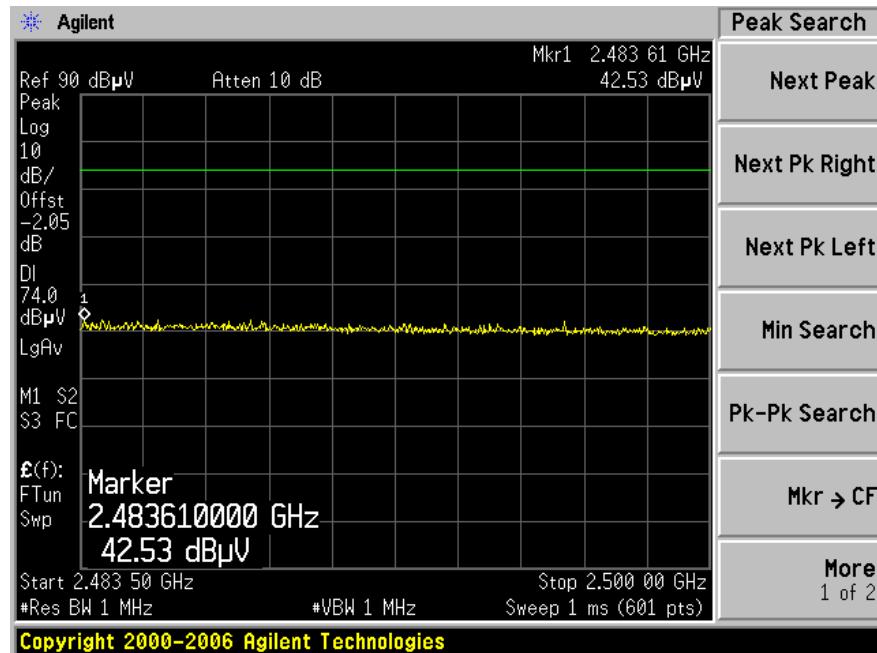
802.11 b (Low channel) at Vertical Peak



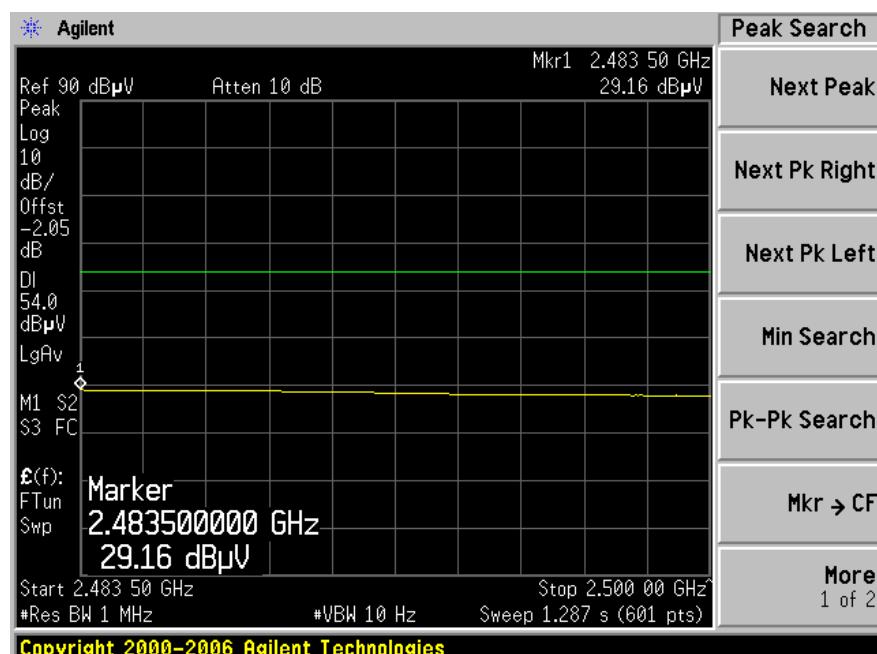
802.11 b (Low channel) at Vertical Average



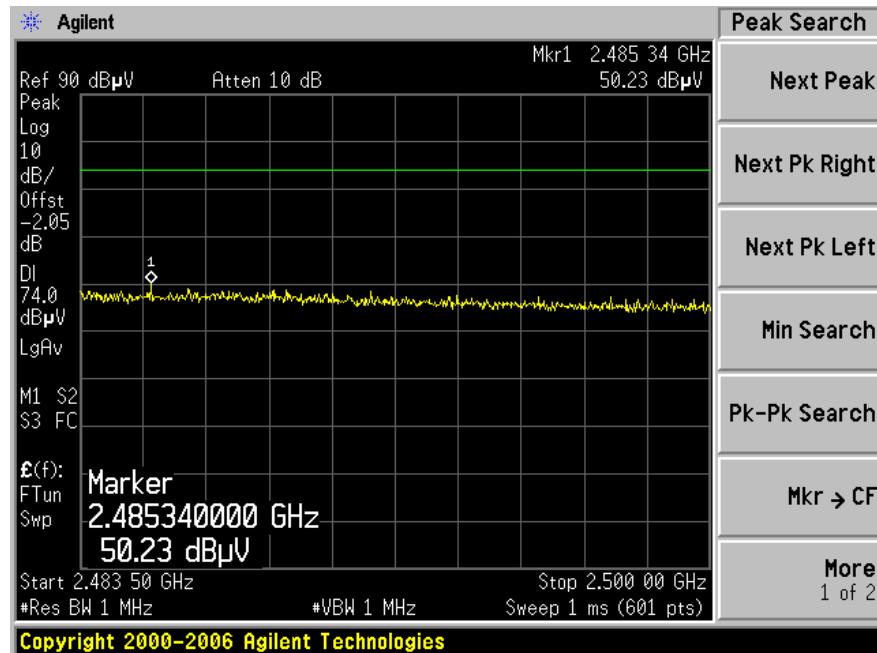
802.11 b (High channel) at Horizontal Peak



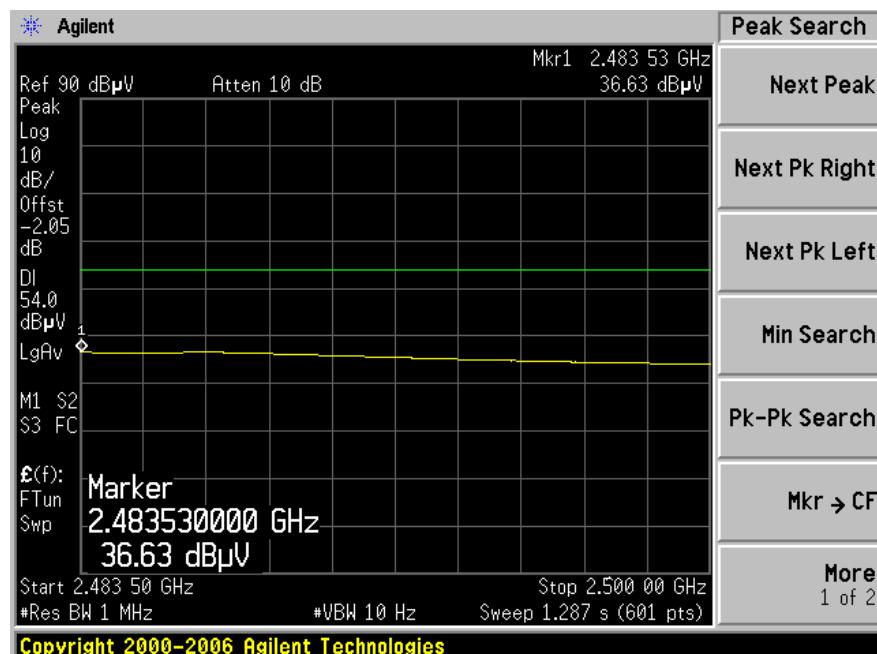
802.11 b (High channel) at Horizontal Average



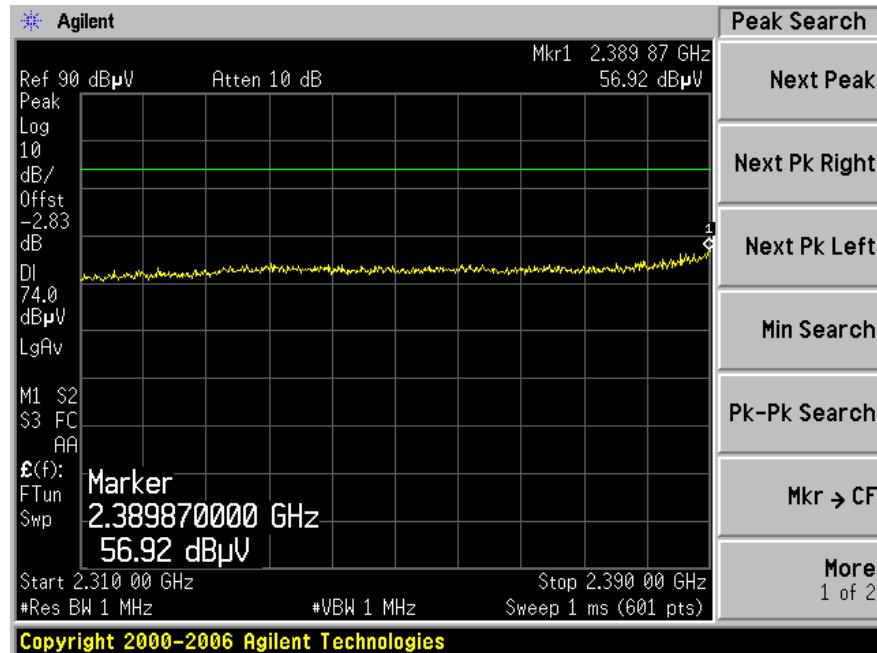
802.11 b (High channel) at Vertical Peak



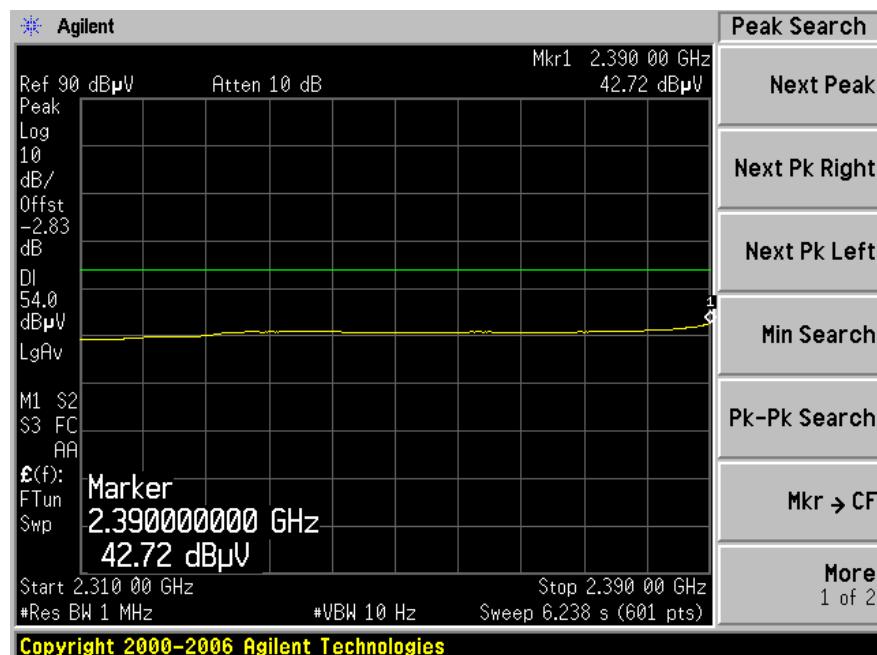
802.11 b (High channel) at Vertical Average



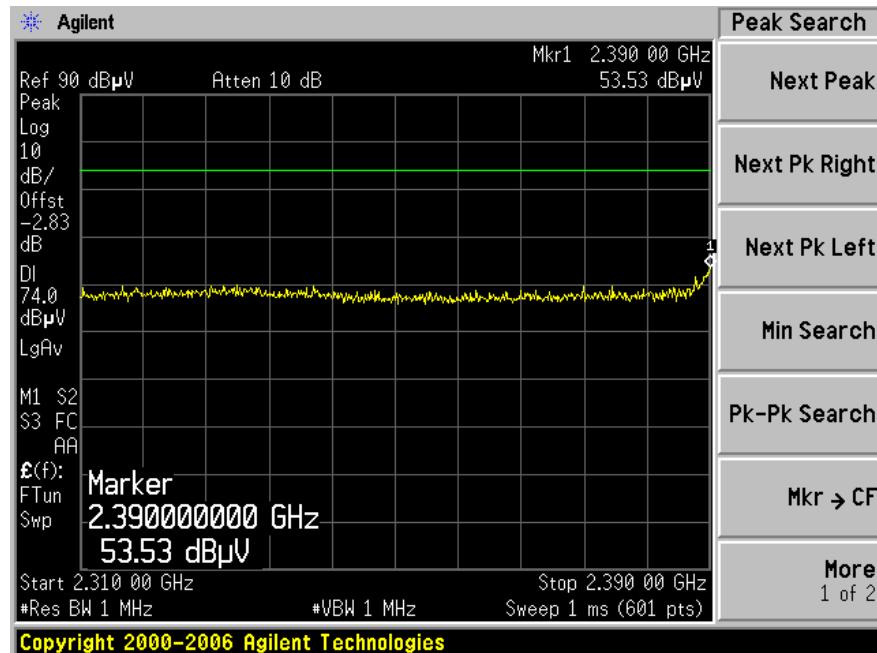
802.11 g (Low channel) at Horizontal Peak



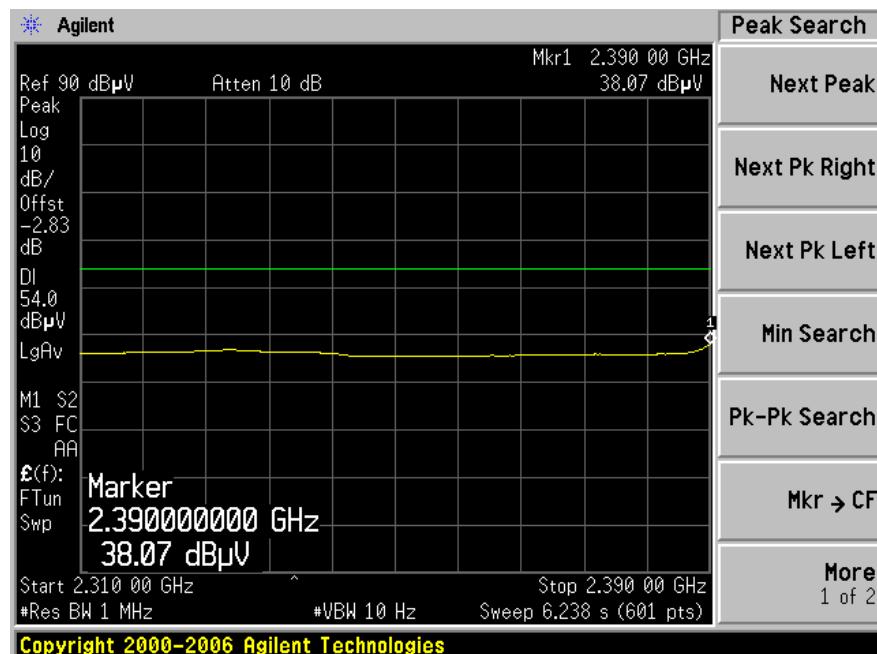
802.11 g (Low channel) at Horizontal Average



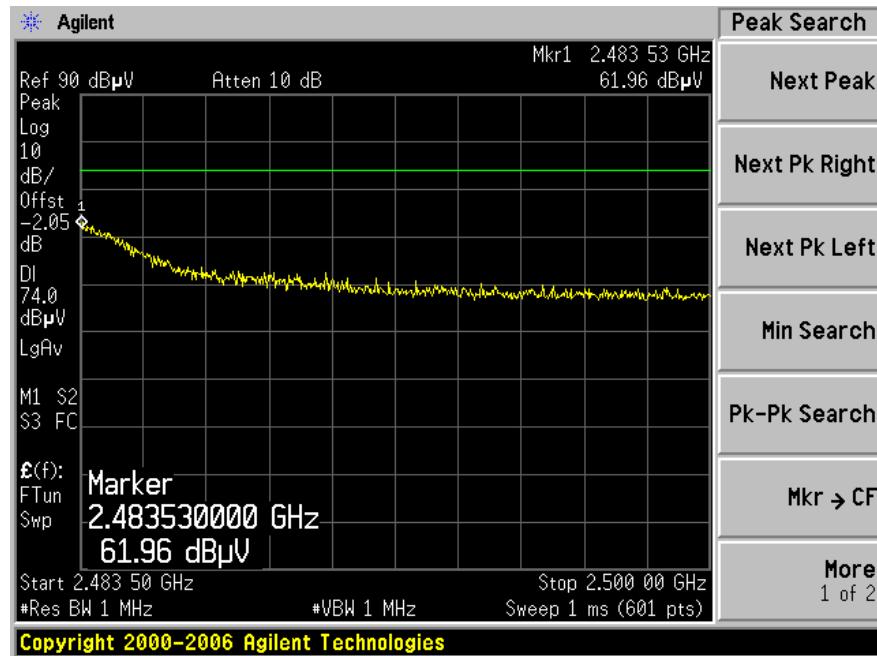
802.11 g (Low channel) at Vertical Peak



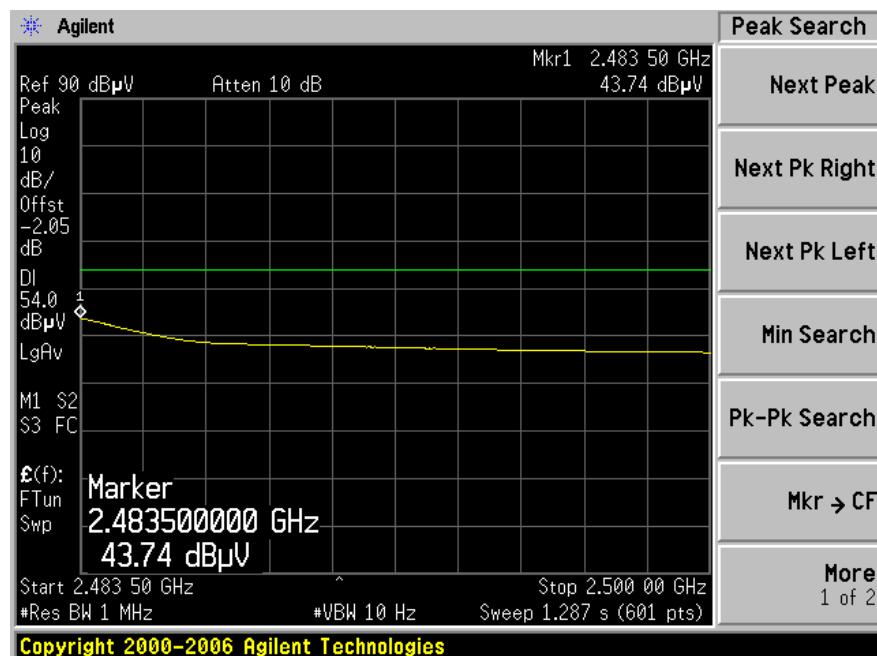
802.11 g (Low channel) at Vertical Average



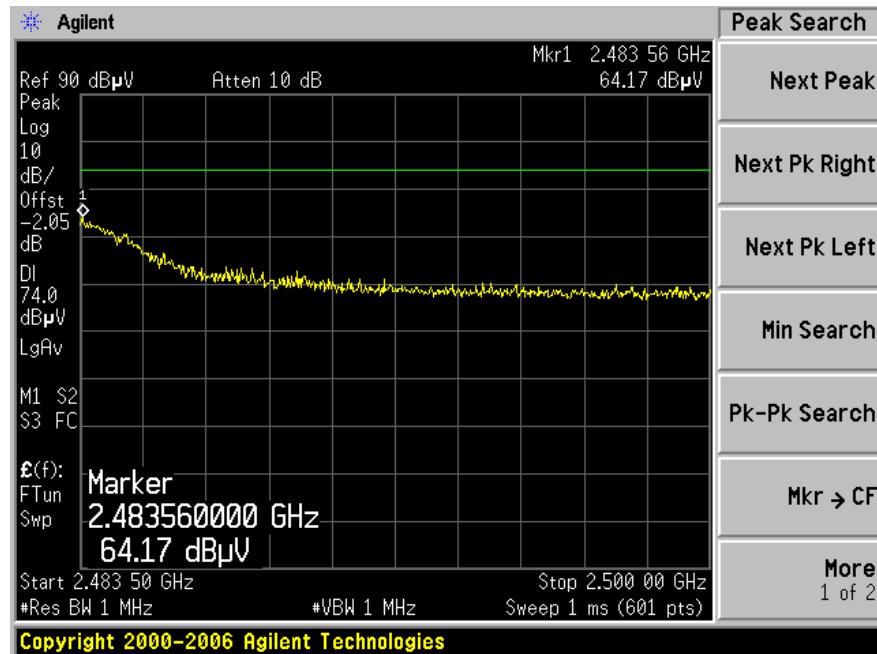
802.11 g (High channel) at Horizontal Peak



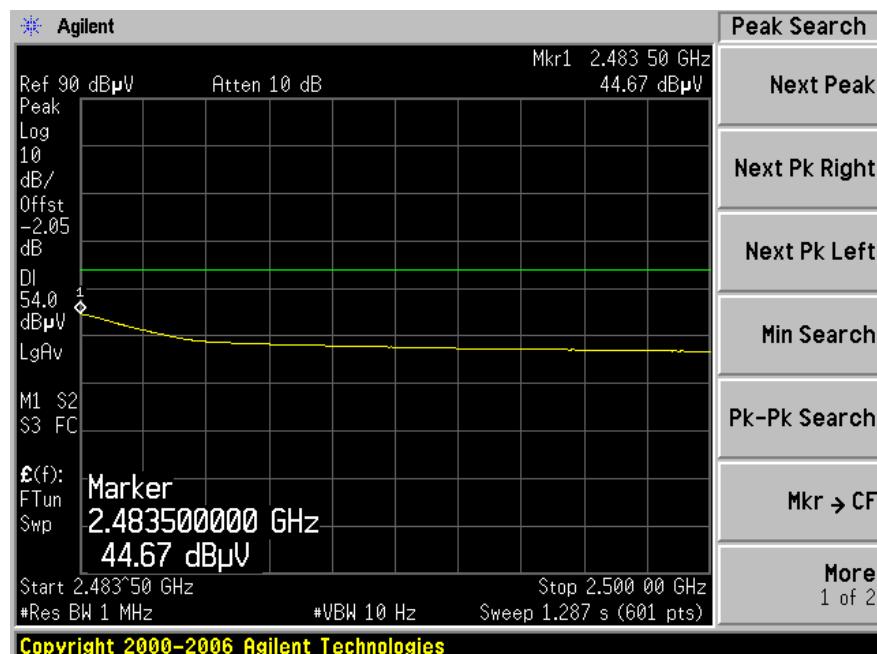
802.11 g (High channel) at Horizontal Average



802.11 g (High channel) at Vertical Peak



802.11 g (High channel) at Vertical Average

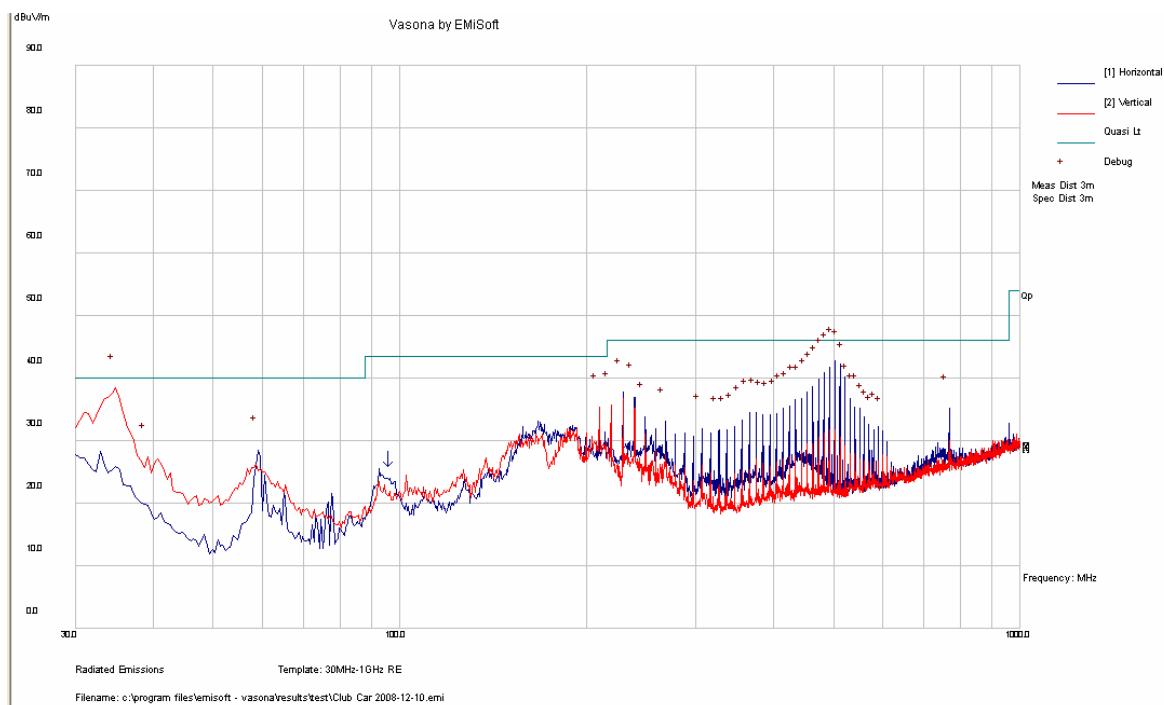


6.9 Radiated Emissions Test plot & data:

802.11b Mode:

30 MHz – 1 GHz:

802.11 b, Middle channel 2437 MHz measured at 3 meters (Worst Condition)



Frequency (MHz)	Cord. Amp. (dB μ V/m)	Test Antenna		Table Azimuth (degree)	Correction Factor (dB)	Limit (dB μ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
511.859	41.98	180	H	334	-1.02	46	-4.02
492.355	41.59	174	H	335	-0.89	46	-4.41
521.612	40.48	164	H	339	-0.86	46	-5.52
482.598	40.13	180	H	331	-0.88	46	-5.87
502.150	39.43	175	H	342	-1.03	46	-6.57
34.779	31.99	128	V	145	-1.26	40	-8.01

Above 1 GHz, Measured at 3 meters

802.11 b, Low Channel (2412 MHz) measured at 3 meters

Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4824	35.91	263	1.00	V	33.1	8.23	36.34	40.90	54	-13.10	Ave
4824	30.99	268	1.20	H	33.1	8.23	36.34	35.98	54	-18.02	Ave
4824	48.59	263	1.00	V	33.1	8.23	36.34	53.58	74	-20.42	Peak
4824	44.14	268	1.20	H	33.1	8.23	36.34	49.13	74	-24.87	Peak

802.11 b, Middle Channel (2437 MHz) measured at 3 meters

Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4874	37.46	225	1.15	V	33.1	8.29	36.3	42.55	54	-11.45	Ave
4874	33.48	203	1.20	H	33.1	8.29	36.3	38.57	54	-15.43	Ave
4874	49.57	225	1.15	V	33.1	8.29	36.3	54.66	74	-19.34	Peak
4874	45.42	203	1.20	H	33.1	8.29	36.3	50.51	74	-23.49	Peak

802.11 b, High Channel (2462 MHz) measured at 3 meters

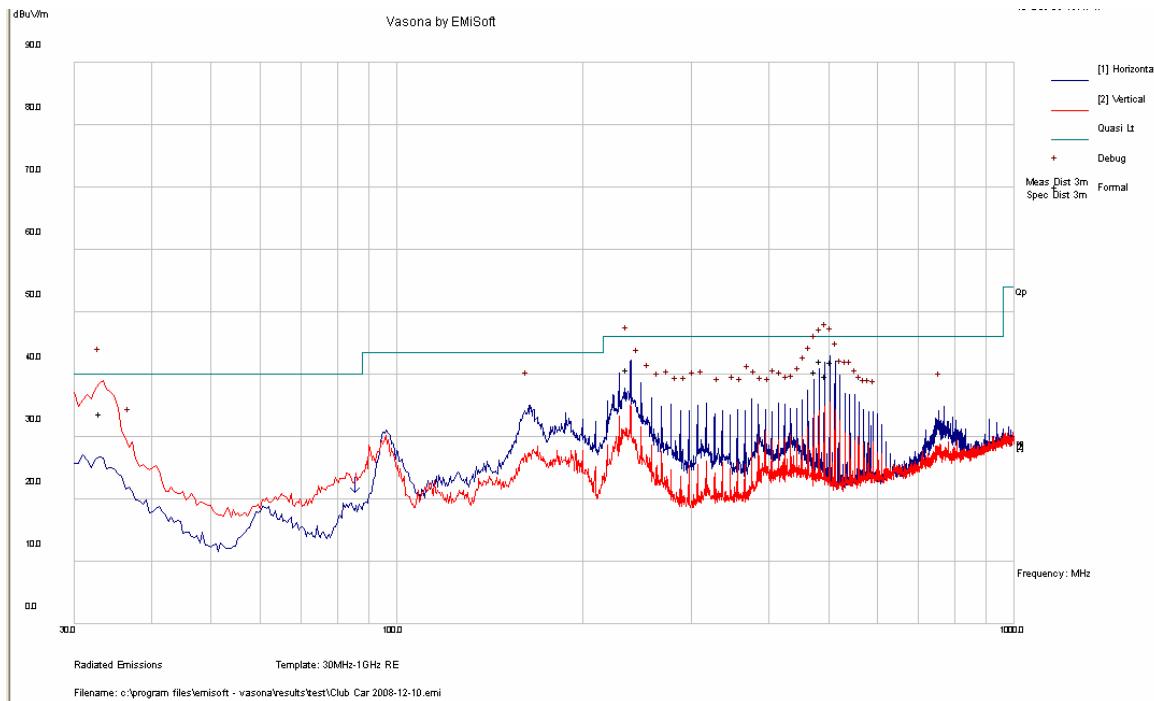
Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4924	34.74	182	1.24	V	33.1	8.35	36.25	39.94	54	-14.06	Ave
4924	29.71	236	1.15	H	33.1	8.35	36.25	34.91	54	-19.09	Ave
4924	47.42	182	1.24	V	33.1	8.35	36.25	52.62	74	-21.38	Peak
4924	42.57	236	1.15	H	33.1	8.35	36.25	47.77	74	-26.23	Peak

Notes: Fund – Fundamental
 Ave - Average Measurement
 Peak – Peak Measurement

802.11g Mode:

30 MHz – 1 GHz:

802.11 g, Middle channel (2437) MHz measured at 3 meters (Worst Condition)



Frequency (MHz)	Cord. Amp. (dB μ V/m)	Test Antenna		Table Azimuth (degree)	Correction Factor (dB)	Limit (dB μ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
492.358	42.13	181	H	302	-0.89	46	-3.87
511.850	42.02	183	H	305	-1.02	46	-3.98
238.855	40.87	100	H	245	-6.17	46	-5.13
482.601	40.46	190	H	303	-0.88	46	-5.54
502.150	39.81	186	H	311	-1.03	46	-6.19
33.457	33.69	105	V	317	-0.21	40	-6.31

Above 1 GHz, Measured at 3 meters

802.11 g, Low Channel (2412 MHz) measured at 3 meters

Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4824	32.38	160	1.12	V	33.1	8.23	36.34	37.37	54	-16.63	Ave
4824	28.40	267	1.12	H	33.1	8.23	36.34	33.39	54	-20.61	Ave
4824	44.50	160	1.12	V	33.1	8.23	36.34	49.49	74	-24.51	Peak
4824	39.33	267	1.12	H	33.1	8.23	36.34	44.32	74	-29.68	Peak

802.11 g, Middle Channel (2437 MHz) measured at 3 meters

Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4874	32.82	165	1.10	V	33.1	8.29	36.3	37.91	54	-16.09	Ave
4874	27.89	210	1.14	H	33.1	8.29	36.3	32.98	54	-21.02	Ave
4874	44.42	165	1.10	V	33.1	8.29	36.3	49.51	74	-24.49	Peak
4874	39.07	210	1.14	H	33.1	8.29	36.3	44.16	74	-29.84	Peak

802.11 g, High Channel (2462 MHz) measured at 3 meters

Frequency (MHz)	S.A. Reading (dB μ V)	Table Azimuth (degree)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dB μ V/m)	FCC Part 15 C		Comments
			Height (m)	Polar. (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	
4924	29.67	162	1	V	33.1	8.35	36.25	34.87	54	-19.13	Ave
4924	25.73	235	1.1	H	33.1	8.35	36.25	30.93	54	-23.07	Ave
4924	43.28	162	1	V	33.1	8.35	36.25	48.48	74	-25.52	Peak
4924	38.81	235	1.1	H	33.1	8.35	36.25	44.01	74	-29.99	Peak

Notes: Fund – Fundamental

Ave - Average Measurement

Peak – Peak Measurement